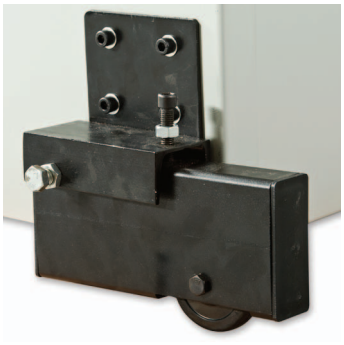
AXMINSTER Hobby SERIES

Code **501249**

AWC4 250mm DeLuxe
Combination Machine



AXMINSTER • 3 • THREE YEAR GUARANTEE

AT&M: 15/09/2014
REF: 508306

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Declaration of Conformity

Copied from CE Certificate

The undersigned, T. Fuhrmann
Authorised by Laizhou Planet Machinery Co., Ltd.
Yutai West Street 261400 P.R. China.

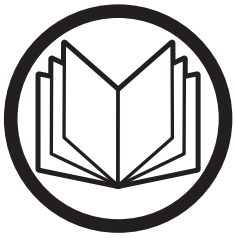
Model Number: ML353G
(Combined Woodworking Machine)

Manufactured by Laizhou Planet Machinery Co., Ltd. is in compliance with the standards determined in the following Council Directive.

EN 55014-1: 2006+A1
EN 61000-3-2: 2006+A1+A2
EN 61000-3-11: 2000
EN 55014-2: 1997+A1+A2

Warning

The symbols below advise that you follow the correct safety procedures when using this machine.



Fully read manual and safety instructions before use

Ear protection should be worn

Eye protection should be worn

Dust mask should be worn

HAZARD Motor gets hot

What's Included

Model Number: **ML353G**

Panel Saw:

1 No.	250mm AWC4 DeLuxe Combination Machine (95% assembled)
1 No:	Rip Fence Assembly
1 No:	250mm Saw Blade
1 No:	Saw Guard
1 No:	Flexible rubber Hose with Support Rod
1 No:	Adjustable Work Clamp Assembly
1 No:	Depth Stop Bracket
1 No:	Sliding Table Guide Rail
2 No:	Sliding Table Guide Rail Stops
1 No:	Sliding Table Extension
1 No:	Sliding Table Extension Support Casting
1 No:	Sliding Table Extension Fence (with Adjustable Depth Stop)

Spindle Moulder:

1 No:	Spindle Moulder Guard Assembly (Fully Assembled):

Planer/Thicknesser:

1 No:	Planer Fence
1 No:	Planer Fence Mounting Base
1 No:	Fence Securing Bracket
1 No:	Overhand Planer Guard Mounting Bracket
1 No:	Overhand Planer Guard
1 No:	Overhand Planer Guard Locking Plate
1 No:	Spring Metal Plate
2 No:	M10 Washers
2 No:	M10 Lever Handle Bolts
2 No:	M6 x 12mm Cap Head Bolts
2 No:	M6 Eye Bolts (for lifting)

Tools:

1 No:	Blade Setting Tool
1 No:	12mm Hex Key
1 No:	10mm Hex Key
1 No:	8mm Hex Key
1 No:	6mm Hex Key
1 No:	5mm Hex Key
1 No:	4mm Hex Key
1 No:	3mm Hex Key
1 No:	7/5.5mm Spanner
1 No:	8/10mm Spanner
1 No:	13/16mm Spanner
1 No:	36/41mm Spanner
1 No:	16mm Socket Spanner
1 No:	Tommy Bar

Wheel Mobility Kit:

1 No:	Mobility Operating Handle
2 No:	Adjustable Wheel Carriages
1 No:	Lifting Bracket
10 No:	M8 Cap Head Bolts and Washers

1 No:	Manual

General Instructions for 230V Machines

Good Working Practices/ Safety

The following suggestions will enable you to observe good working practices, keep yourself and fellow workers safe and maintain your tools and equipment in good working order.

WARNING! KEEP TOOLS AND EQUIPMENT OUT OF THE REACH OF YOUNG CHILDREN

Mains Powered Tools

Mains Powered Tools Primary Precautions

This machine is supplied with a moulded 16 Amp. Plug and 3 core power cable. Before using the tool inspect the cable and the plug to make sure that neither are damaged. If any damage is visible, have the tool inspected/repaired by a suitably qualified person. If it is necessary to replace the plug, it is preferable to use an 'unbreakable' type that will resist damage on site. Only use a 16 Amp plug, and make sure the cable clamp is tightened securely. Fuse as required. If extension leads are to be used, carry out the same safety checks on them, and ensure that they are correctly rated to safely supply the current that is required for your machine.

Work Place/Environment

The machine is not designed for sub-aqua operation, do not use when or where it is liable to get wet. If machine has got wet; dry it off as soon as possible with a cloth or paper towel. Do not use 230V a.c. powered tools anywhere within a site area that is flooded or puddled, and do not trail extension cables across wet areas. Keep the tools clean; it will enable you to more easily see any damage that may have occurred. Clean the tools with a damp soapy cloth if needs be, do not use any solvents or cleaners, as these may cause damage to any plastic parts or to the electrical components.

Keep the work area as uncluttered as is practical, this includes personnel as well as material.

Under no circumstances should **CHILDREN** be allowed in work areas.

It is good practice to leave the machine unplugged until work is about to commence, also make sure to unplug the machine when it is not in use, or unattended. Always disconnect by pulling on the plug body and not the cable. Once you are ready to commence work, remove any tools used in the setting operations (if any) and place safely out of the way. Re- connect the machine.

Carry out a final check e.g. check the cutting tool, drill bit etc., are securely tightened in the machine, check you have the correct speed and function set, check that the power cable will not 'snag' etc.

Make sure you are comfortable before you start work, balanced, not reaching etc. If the work you are carrying out is liable to generate flying grit, dust or chips, wear the appropriate safety clothing, goggles, gloves, masks etc. If the work operation appears to be excessively noisy, wear ear-defenders. If you wear your hair in a long style, wearing a cap, safety helmet, hairnet, even a sweatband, will minimise the possibility of your hair being caught up in the rotating parts of the machine, likewise, consideration should be given to the removal of rings and wristwatches, if these are liable to be a 'snag' hazard. Consideration should also be given to non-slip footwear, etc. If you are allowing another person to use the machine, ensure that they are suitably qualified to use it.

Do not work with cutting or boring machine of any description if you are tired, your attention is wandering or you are being subjected to distraction. A deep cut, a lost fingertip or worse is not worth it!

Do not use this machine within the designated safety areas of flammable liquid stores or in areas where there may be volatile gases. There are very expensive, very specialised machines for working in these areas, **THIS IS NOT ONE OF THEM.**

Check that cutters, drills etc., are the correct type and size, are undamaged and are kept clean and sharp, this will maintain their operating performance and lessen the loading on the machine. Above all, **OBSERVE….** make sure you know what is happening around you, and **USE YOUR COMMON SENSE.**

Panel Saw

Make sure the saw blade is the correct type for the job in hand.

Do not force the saw, if the saw begins to 'stall' you are 'forcing the cut' or over working the saw. Ensure that the saw blade is clean and sharp. Resin build up on the blades will increase the friction of the saw passing through the timber, and cause over heating of the blade, blunt teeth will work harder tearing the fibre of the timber as opposed to shearing it, also with subsequent overheating. Both faults unnecessarily load the machine beyond normal usage, and shorten its longevity.

Do not use blades that are deformed in any way.

Do not remove the blade guard. The design of the riving knife on the machine will not allow for slotting or 'blind' grooving, so there is no reason to remove the guard. There is adequate clearance under the guard for the capacity of the machine (75mm).

Do not remove the riving knife.

Do not use any blades that cut a smaller kerf than the riving knife thickness. Make sure the riving knife is correctly adjusted to the blade and is securely fastened. If the table insert becomes damaged or broken, and will not support the timber 'up close' to the blade, replace it.

Do not start the saw with the work piece touching the blade.

Do not commence sawing until the blade has run up to full speed. After switching off, never try to slow the saw down more quickly by applying side pressure (with a piece of wood?) to the blade. Apply the old joiner's adage of never getting hands within one handbreadth of the blade. Leave the machine disconnected from the mains supply until you are about to commence work. Always disconnect the machine if you are leaving it unattended.

Never leave the vicinity of the machine unless the blade has come to a complete stop.

Do not attempt to carry out any maintenance, corrective work, setting up etc., unless the machine is disconnected from the mains supply. If any tools have been used during setting up procedures, make sure they are removed from the machine and stowed safely away.

Do not attempt to carry out cross cutting operations 'freehand', always use the mitre fence for small material and the sliding carriage for larger work pieces. Unless you are an experienced machine operator, do not attempt to 'rip' freehand, always use the guiding facility of the rip fence. It is perfectly acceptable to support, guide, and feed the timber with your hands whilst ripping stuff of some length, however, as you approach the blade ensure that the push stick is to hand, and you use it.

Remember the emphasis of the 'push' should be between the blade and the fence and close to the fence. Use your free hand to support and guide the material on the offside of the saw blade and at least 100mm away from it. If the timber does not extend to at least 100mm to the offside of the saw blade, the material possibly does not need guiding or supporting.

Check (especially on site), that there are no foreign objects e.g. old nails, screws, small stones etc embedded in the material you are about to cut. If necessary take a wire brush to the timber before working.

If you are being assisted whilst using the saw (by a 'take off' or 'support' number?), remember there is only one sawyer at a machine, and they stand in front of it. The assistant does not push, pull, guide etc., unless specifically asked or instructed to do so by the sawyer.

Spindle Moulder

Authorised Use

This machine is designed for shaping wood and wood derived materials.

Machining of other materials is not permitted and may be carried out in specific cases only after consulting with the manufacturer.

The proper use also includes compliance with the operating and maintenance instructions given in this manual.

The machine must be operated only by persons familiar with its operation and maintenance and who are familiar with its hazards.

The required minimum age must be observed. The machine must only be used in a technically perfect condition. When working on the machine, all safety mechanisms and covers must be in operation.

Continues Over....

Specific Safety Precautions

In addition to the safety requirements contained in these Operating Instructions and your country's applicable regulations, you should observe the generally recognized technical rules concerning the operation of woodworking machines.

Any other use exceeds authorisation.

In the event of unauthorised use of the machine, the manufacturer renounces all liability and the responsibility is transferred exclusively to the operator.

General Safety Notes

Woodworking machines can be dangerous if not used properly. Therefore the appropriate general technical rules as well as the following notes must be observed.

Read and understand the entire instruction manual before attempting assembly or operation.

Keep these Operating Instructions close by the machine, protected from dirt and humidity, and pass them over to the new owner if you part with the tool.

No changes to the machine may be made.

Daily inspect the function and existence of the safety appliances before you start the machine.

Remove all loose clothing and enclose long hair.

Before operating the machine, remove tie, rings, watches, other jewellery, and roll up sleeves above the elbows.

Wear safety shoes; never wear leisure shoes or sandals.

Always wear the approved working outfit.

Do not wear gloves while operating the machine.

For the safe handling of cutting tools wear work gloves.

Control the stopping time of the machine, it may not exceed 10 seconds.

Remove cut and jammed work pieces only when the machine is at a complete standstill and motor is turned off.

Install the machine so that there is sufficient space for safe operation and work piece handling.

Keep work area well lit.

Planer/Thicknesser

Most machines currently are well interlocked to ensure that the machine must be in the correct configuration to perform one task or the other. Make yourself familiar with these configurations and do not try to use the machine in a half and half state, or rig the interlocks to enable you to do so. These machines are designed for cutting timber only. They will, but are not designed to, cut timber derivatives or composites. Glue lines in plywood, block board etc, will 'notch' the blades. The bonding agent in chipboard is likewise detrimental to the health of your planer knifes. It is best to leave them alone. If you have to machine composites, work out the costs of tungsten, against HSS (plus the sharpening costs), and proceed accordingly. On larger machines it is common practice to leave a portion of the blade (usually the offside 30 mm) to be used on 'aggressive' materials.

Overhand Planing

Make sure during overhand planing operations, that the fence is set to the required angle, is securely fastened and locked in position. Ensure the planer block guarding is in position and secured.

Disengage the autofeed for the thicknesser. Ensure both tables are correctly seated and locked down. Ensure the dust extraction hood is in place and is not blocked. Fit dust extraction.

Check the sharpness of planer knifes, check for 'nicks' and 'notches', if there are damaged sections on the blades, try to plane in the 'clear' areas.

Especially when planing material down to 'thin' dimensions, maintain pressure on the 'front' of the material i.e., that portion of the stuff that has passed over the block, but use a push stick or a pusher shoe to clear the end of the stuff over the block.

Thicknessing

When thicknessing, remove the fence. Lower the thicknessing table slightly.

Unlock and swing both tables 'up and out of the way', taking care not to foul the overhand guard/arm assembly, which will probably swing free.

Turn the dust extraction hood up and over the block.

Connect the dust extraction. Ensure the hose will not foul the wood when being passed through the machine.

Check the height of the thicknessing table.
Engage the autofeed mechanism.

Periodically, clean any excess build up of resin from the thicknessing table, and apply any proprietary brand of lubricating agent.

NOTE, Consideration should be given to the type of finish you will be applying to the wood when you select your cleaning/lubrication agent. Some compounds won't mix. i.e. PTFE and Acrylic.

Specification

Model	AWC4
Code	501249
Rating	Hobby
Power	3,000W (Saw) 2,000W (Planer) 3,000W (Spindle) 230V
Number of Motors	3
Blade Speed	4,050rpm
Blade Tilt	0 - 45°
Blade Dia/Bore	250mm x 30mm
Table Size	1,200 x 840mm (Saw) 250 x 1,050mm (Planer) 250 x 600mm (Thicknesser)
Max Ripping Width	460mm
Max Depth of Cut @ 45˚	45mm
Max Depth of Cut @ 90˚	65mm
Max Planing Width	250mm
Sliding Table Size	1,200 x 120mm
Cutterblock Speed	4,000rpm
Cutterblock Diameter	75mm
Knives	HSS x 3
Feed Speed	8m/min
Max Thicknesser Capacity	180mm
Spindle Speed	3,500, 5,500, & 7,500rpm
Spindle Diameter	30mm
Spindle Travel	130mm
Max Tooling Diameter Above Table	140mm
Dust Extraction Outlet	100mm x 3
Weight	370kg

Assembly Instructions

PLEASE NOTE: Some of this assembly procedure is best accomplished by two persons. Although the tasks are not impossible, some of the items are heavy and awkward, and a mishandling error could cause injury. Please think about what you are doing, your capabilities and your personal safety.

Unpack all the boxes and check all the components against the "What's in the Boxes' List. If any parts or components are missing, please contact our customer services department using the procedures and telephone numbers listed in our catalogue, and you will be dealt with quickly and efficiently.

PLEASE NOTE: that, on occasion, the packing list is not strictly adhered to, please check all the boxes, packets etc, to make sure that all the parts have been accounted for.

Having unpacked the boxes, (please dispose of any unwanted packaging responsibly), put the parts and components whereby they are readily to hand. Break down the main box by knocking the sides away (be careful of exposed nails etc.), but leave the machine sitting on its pallet. Remove the protective grease film that is coating all the unpainted parts of the machine. Use a proprietary de-greasing agent or paraffin. Unfortunately, this cleaning process is always a bit 'mucky' especially if you tackle the job with a high level of enthusiasm. You are advised to wear overalls or coveralls etc., during the process. After cleaning, especially if you used paraffin, lightly coat the exposed metal surfaces to prevent any rusting.

Note: The AWC4 Combination Machine comes 95% assembled, in order to reduce the footprint of the machine for packaging, several items are dismounted from the machine and need to be re-affixed.

WHEN YOU FIRST RECEIVE YOU COMBINATION MACHINE IF YOU INTEND TO USE THE SPINDLE MOULDER FIRST PLEASE GO TO PAGES 12-13 FOR ASSEMBLY INSTRUCTION.

Panel Saw

Fitting the Saw Guard

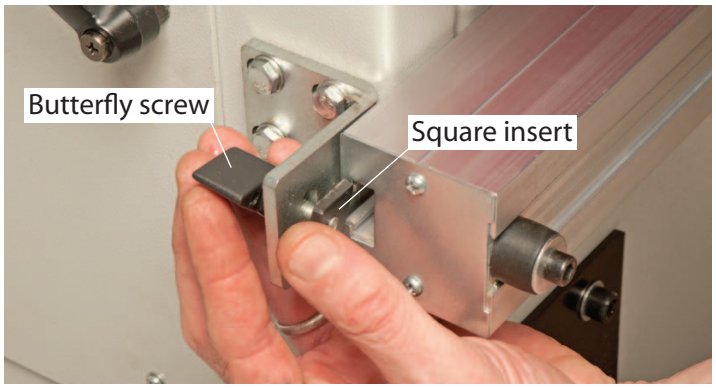
Locate the saw guard and M6 caphead screw and M6 nut and attach it to the riving knife using a 5mm hex key, see fig 1.

Fig 01

Extension Table

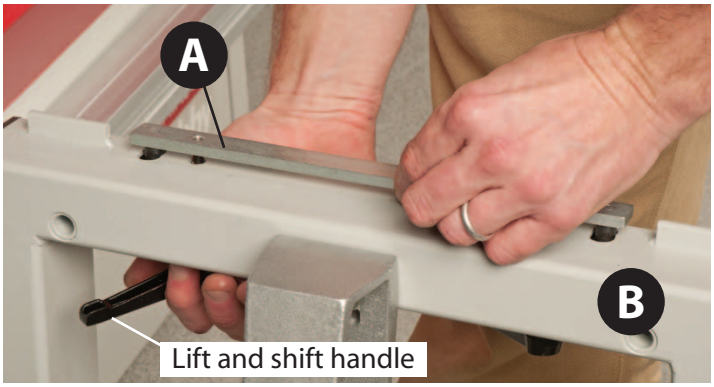
1). Locate the table extension guide rail and two square inserts and butterfly screws. Insert the butterfly screws through the pre-drilled holes in the angle brackets, screw on the square inserts and slot them into the 'T' slots on the extension rail see fig 2. Position the extension rail so it's over hanging more to the right of the machine and tighten the butterfly screws to clamp the extension rail in position, see fig 3.

Fig 02-03



2) Locate the steel pin plate (A) , line up the pins with the elongated slots in the extension table (B) and lower the plate into the table, see fig 4. Locate the two lift and shift

Fig 04



handles and slot them through the two pre-drilled holes in the extension table (B) and screw them into the threaded holes in the steel pin plate (A). **NOTE: Make sure to leave sufficient clearance between the steel plate and the table frame for the next step.**

3) Position the extension table (B) against the sliding table assembly. Line up the steel pin plate (A) with the 'T' slot to the end of the sliding table and slide on the extension table (B), see fig 05.

4) Position the extension table so it's roughly centred to the sliding table and tighten the two lift and shift handles to lock the asssembly in position, see fig 6.

Fig 05

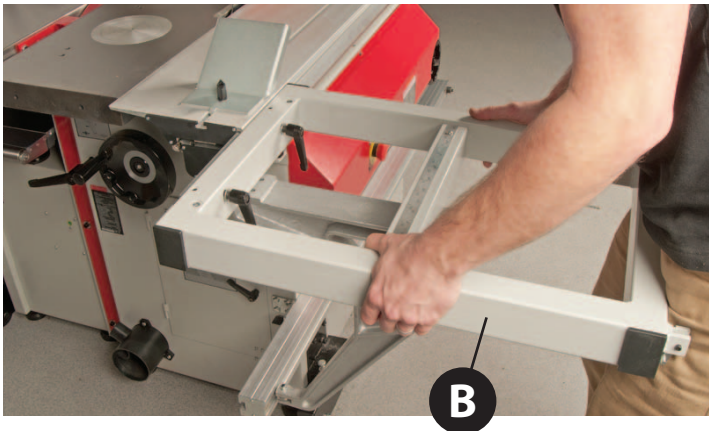
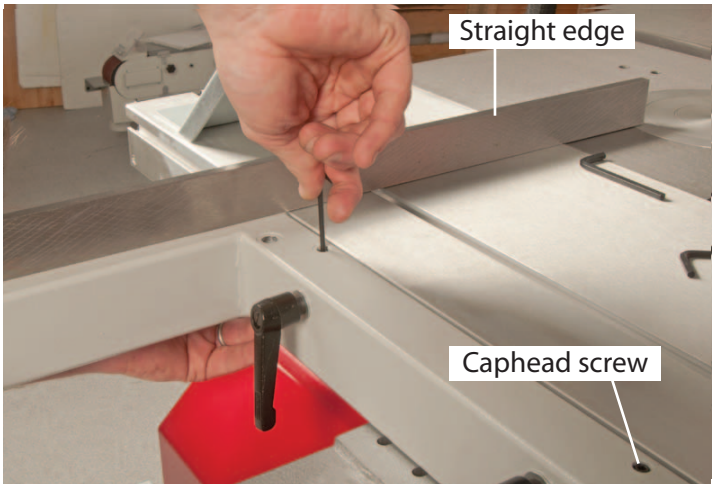


Fig 06

MAKE SURE THE SUPPORT CASTING WHEEL RUNS SMOOTHLY ALONG THE EXTENSION RAIL!

5) On top of the extension table there are two adjustment caphead screws, using a straight edge adjust the screws until both sliding and extension tables are level.

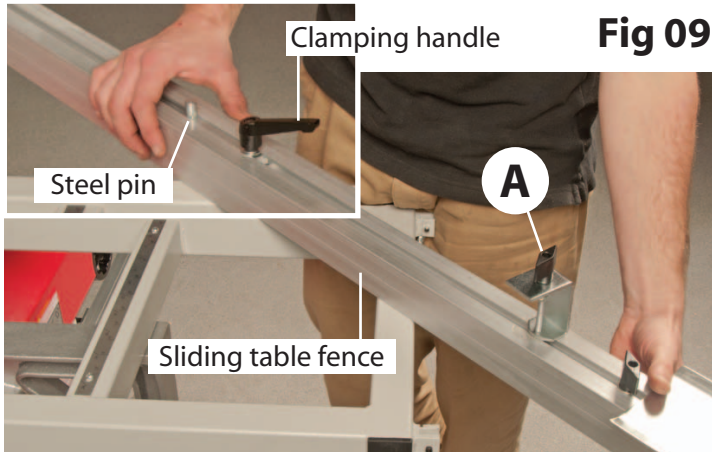
Fig 07-08



Sliding Table Fence

Locate the sliding table fence, loosen the angle bracket clamp by undoing the butterfly knob (A), loosen the steel pin by releasing the clamping handle beneath the fence, see fig 9. Line up and push the steel pin into one of the

Fig 09



Continues Over....

two pre-drilled holes on top of the extension table, see fig 10. Lift-up the 90˚ stop located to the corners of the extension table, push the fence up against the 90˚ stop, see fig 11 and clamp the angle bracket (A) to the table's steel girder by tightening the butterfly knob, see fig 12. Re-tighten clamping handle to lock the fence in position, see fig 10.

Fig 10

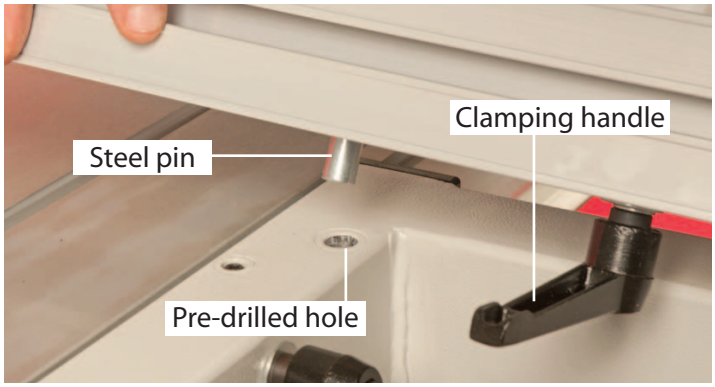
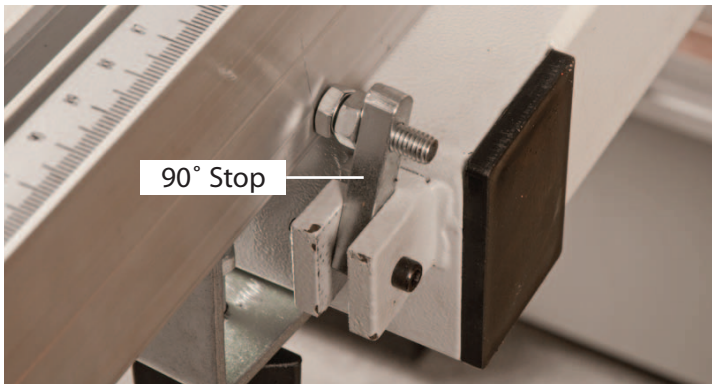
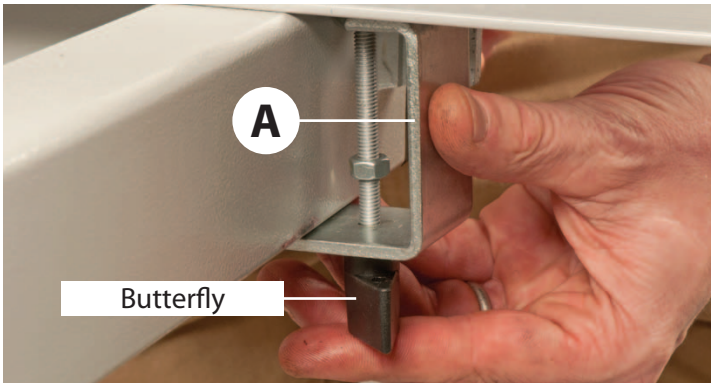


Fig 11-12

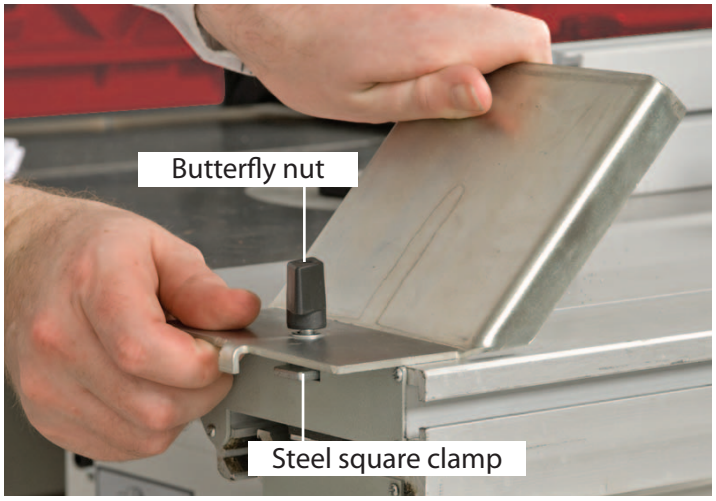




Workstop Plate

Fit the workstop plate by loosening the butterfly nut, insert the steel square clamp into the 'T' slot on the sliding table and re-tighten the butterfly nut, see fig 13.

Fig 13



Work Clamp

Locate the work clamp assembly, loosen the clamping ring, slot the clamp assembly into the sliding table's 'T' slot and tighten the ring to clamp the assembly in place., see fig 14.

Fig 14

Dust Extraction Hose

Locate the 'Y' rod which will support the flexible hose and screw the threaded end into one of the pre-drilled holes on top of the planer/thicknesser chassis, see fig 15. Attach one end of the hose to the moulded outlet in the saw guard, (make sure it is a snug fit) see fig 16. Attach the other end to the dust extraction outlet, see fig 17. Lower the hose into the 'Y' support rod to raise the hose clear of the work table, see fig 18.

Fig 15

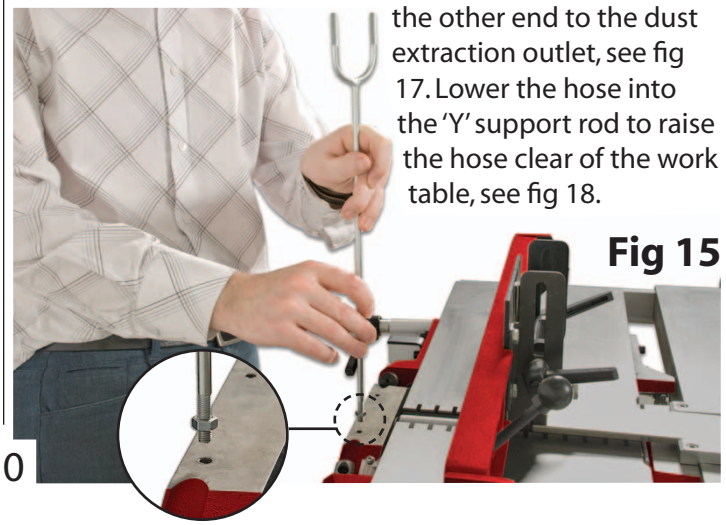


Fig16

Fig 17

Fig 18

Rip Fence Assembly

Locate the rip fence (A), rip fence extension (B) with 'T' bolts, washers and clamping knobs, fence guide rail (C) and two M8 x 50 bolts and nuts.

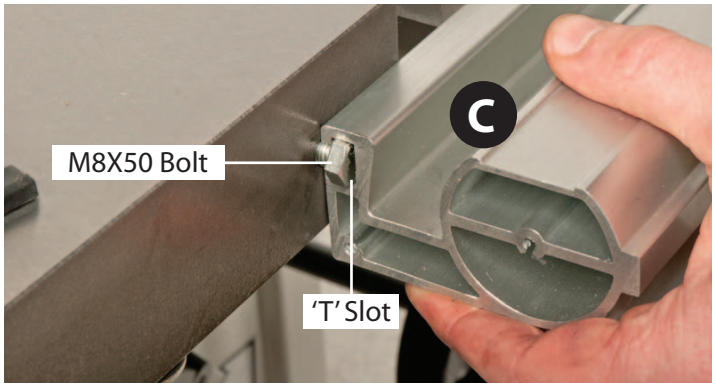
1) Insert the two M8 bolts into the pre-drilled holes to the side of the main saw table and loosely screw on the nuts.

2) Remove the cover to the end of the fence guide rail (C) by removing the two Phillips screws, place safely aside, see fig 19.

3) Line up the first bolt head with the 'T' slot in the fence guide rail and slide on the rail, repeat for the remaining bolt, see figs 20-21.

Fig 19

Fig 20-21



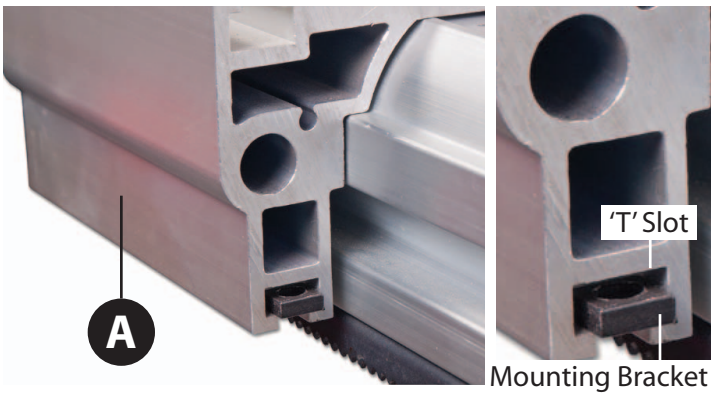
4) Replace the cover to the end of the guide rail (C) and secure with the Phillips screws you removed earlier. Position the rail so it lines up with the edge of the saw table and only finger tighten the nuts at this point, see fig 22.

Fig 22

Continues Over....

5) Locate the rip fence (A) and lower the clamp assembly over the guide rail (C), see fig 23.

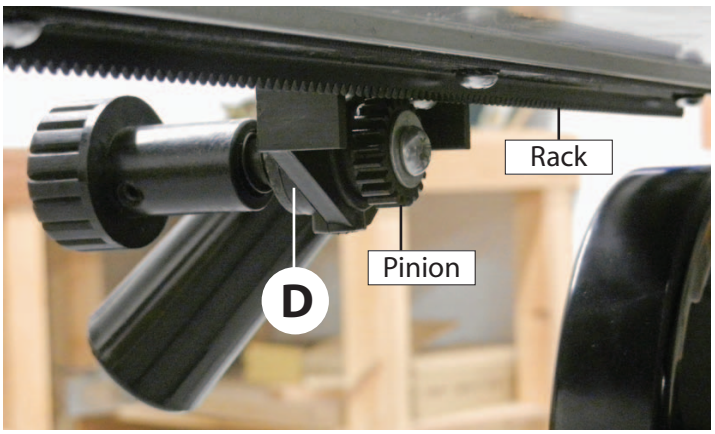
Fig 23- 24



6) Locate the micro adjuster assembly (D) and remove the mounting bracket by removing the two Phillips screws, place safely aside. Remove the end cover from the fence clamp assembly (A) and place aside. Insert the mounting bracket into the 'T' slot to the side of the fence casting assembly, see fig 24. Line up the pre-drilled holes in the micro adjuster with the holes in the mounting bracket, making sure the pinion engages into the rack beneath the fence guide rail (C), secure the micro adjuster with the two Phillips screws you removed earlier, see figs 25-26.

Fig 25

Fig 26



Rip-Fence Extension

1) Locate the rip fence extension (B) and the two 'T' bolts, washers and clamping knobs. Slide the 'T' bolts into the 'T' slot to the end of the fence extension casting, see fig 27.

2) Line up the 'T' bolt threads and insert them through the two pre-drilled holes to the side of the rip fence, push the fence extension up against the fence and secure in place with the two clamping knobs and washers, see figs 28-29.

Fig 27

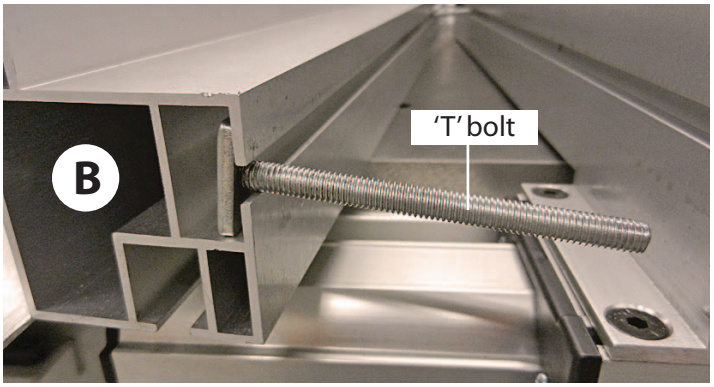
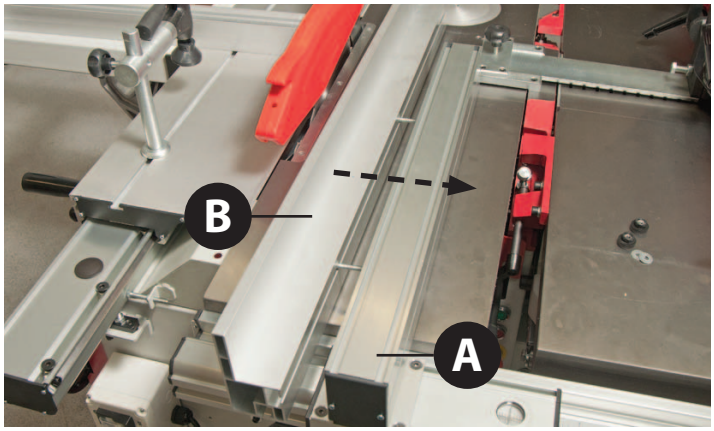
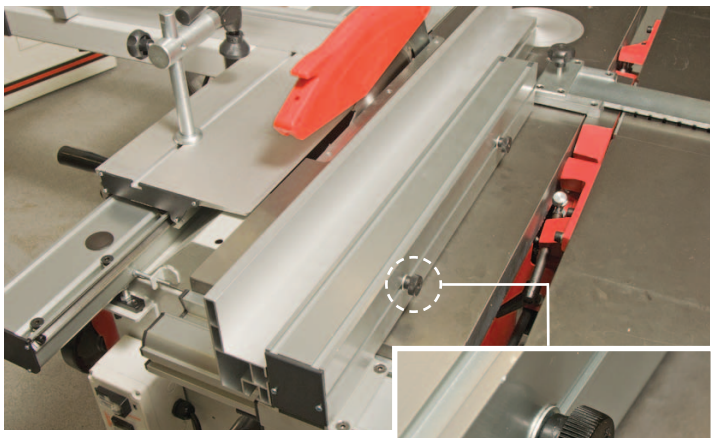


Fig 28-29

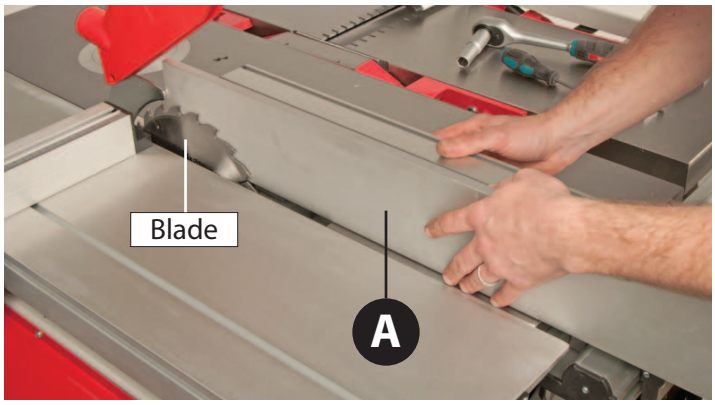


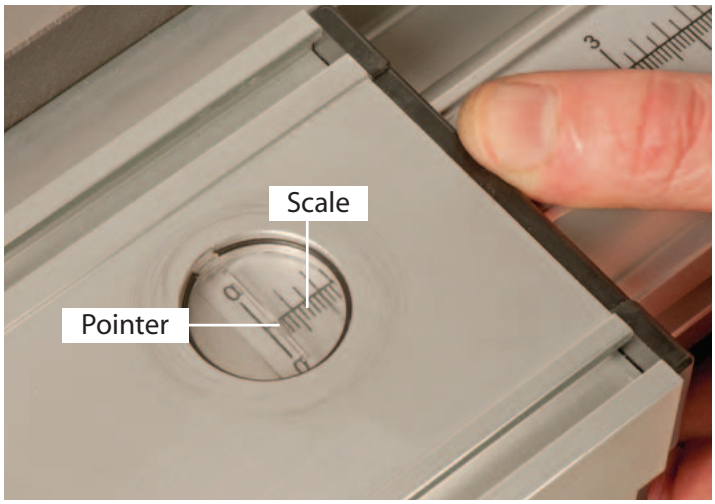


Clamping knob

3) Raise the saw blade to it's highest point and slide the fence assembly (A) up against the blade and adjust the fence guide rail (C) until the pointer reads '0'on the scale then tighten the two nuts beneath the arm rail to secure the assembly, see fig 30.

Fig 30

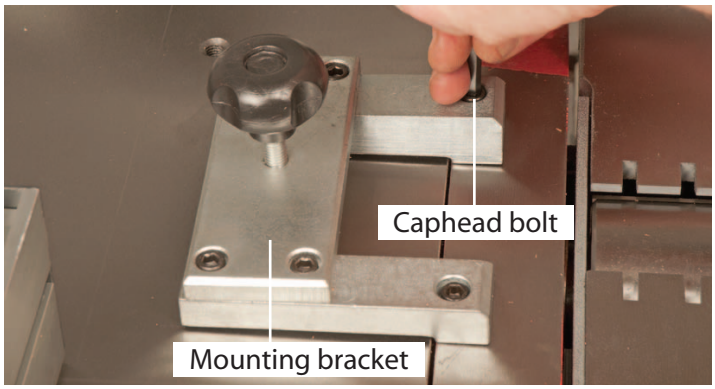




Planer/Thicknesser

Locate the fence mounting bracket and fix to the machine casting as shown in fig 31, using 2 No. M6 x 12mm caphead bolts, depending on your preferred handing. Introduce the planer fence base into the bracket; so that the planer fence base slides into the fence mounting bracket; then secure; position the fence approximately mid-table, see fig 32.

Fig 31



Mount the overhand plane guard arm onto the side of the out feed table that corresponds to your preferred handing, then fit the overhand cutter block guard. In the accessories packet there is a small spring metal plate, this fits into the overhand guard clamping assembly to spread the load of the guard clamp onto the guard. It also prevents the bolt scoring the upper surface of the guard, fasten in position using the guard lock,see fig 33-34.

Fig 32

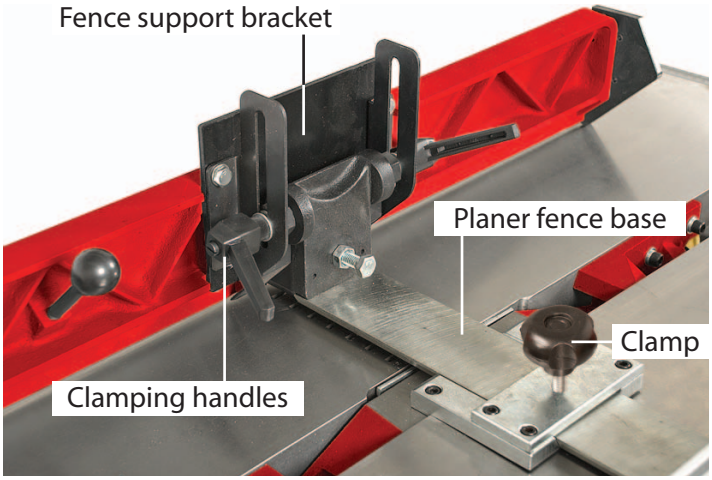
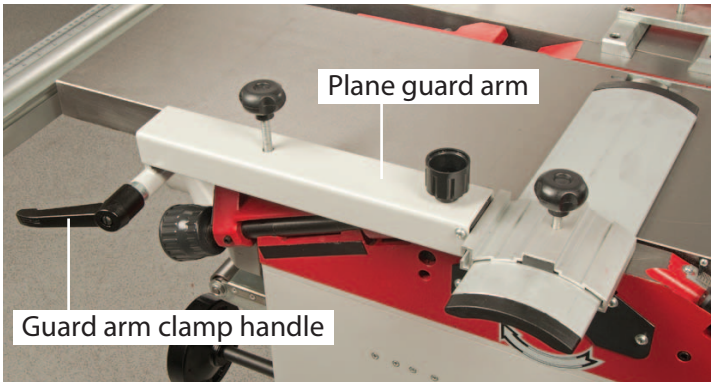
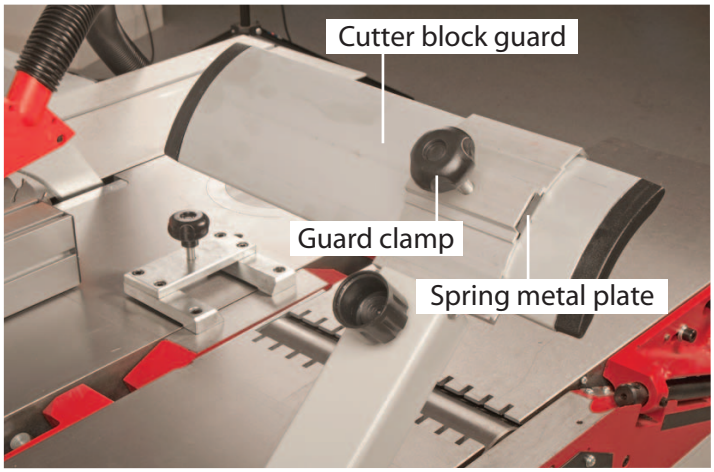


Fig 33-34





Continues Over....

Spindle Moulder

WARNING!! DISCONNECT THE MACHINE FROM THE MAINS BEFORE CONTINUING!

NOTE: IN ORDER TO INSTALL THE SPINDLE MOULDER ASSEMBLY THE FOLLOWING COMPONENTS NEED TO BE REMOVED.

1) Remove the panel saw rip fence by lifting the locking lever up and lifting the fence away from the guide rail, place safely aside.

2) Disconnect the dust extraction hose from the saw guard, remove the guard and place safely aside then lower the saw beneath the table.

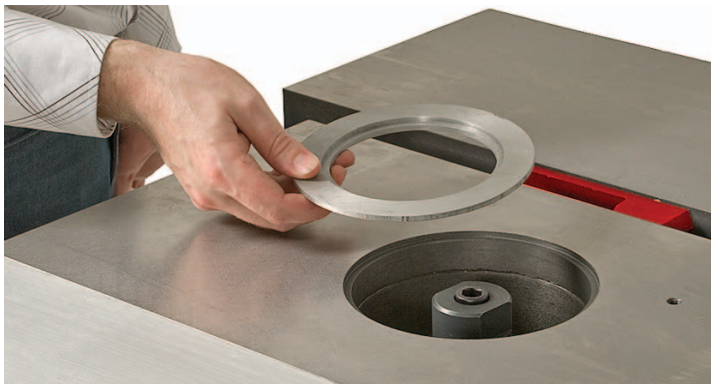
4) Remove the planer/thicknesser fence assembly by undoing the two M6 caphead bolts on the mounting bracket and placing the fence assembly safely aside.

5) Remove the workstop plate.

The spindle moulder guarding comes fully assembled but is not yet mounted to the work table, see instructions below for mounting the spindle moulder assembly.

1) Remove the circular rings from the work table and place aside, see fig 35-36-37.

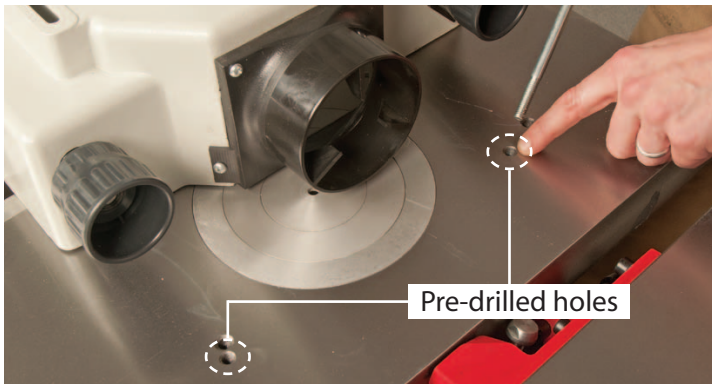
Fig 35-36-37

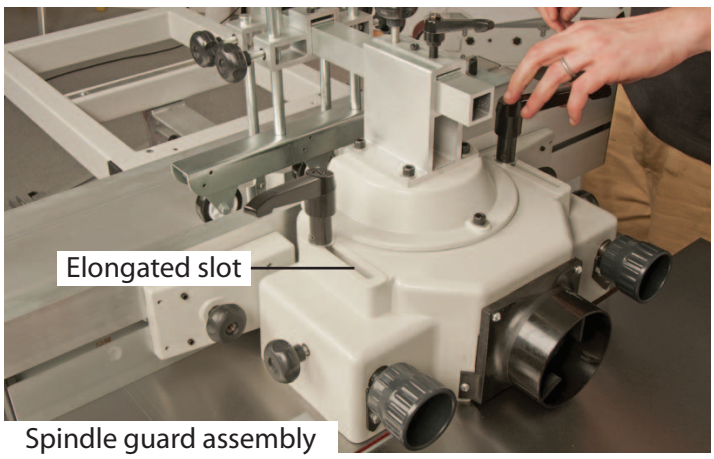


2) Lift the spindle guard assembly onto the work table, manoeuvre the assembly over the pre-drilled holes in the table. Insert threaded clamping handles through the elongated slots and align the two pre-drilled threaded holes on either side of circular ring, see fig 38.

3) Loosely screw the guard assembly down onto the table, see fig 39-40.

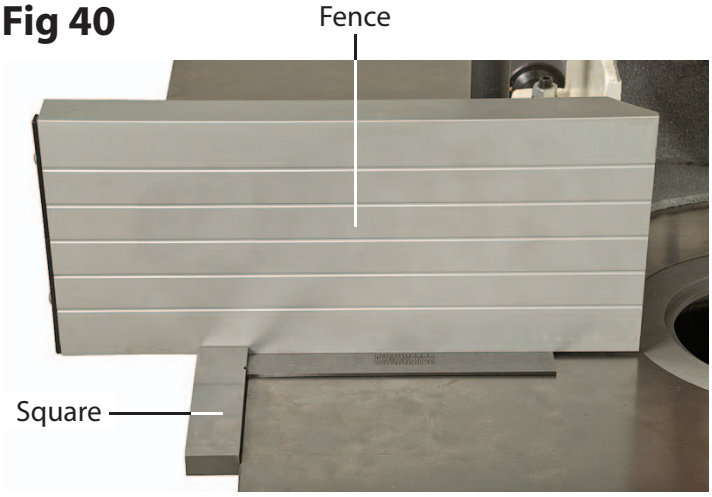
Fig 38-39-40





4) Place a 90˚degrees square against the fence and adjust the assembly until the fence is perpendicular to the table, tighten the clamping handles to lock the guard in place, see fig 40.

Fig 40

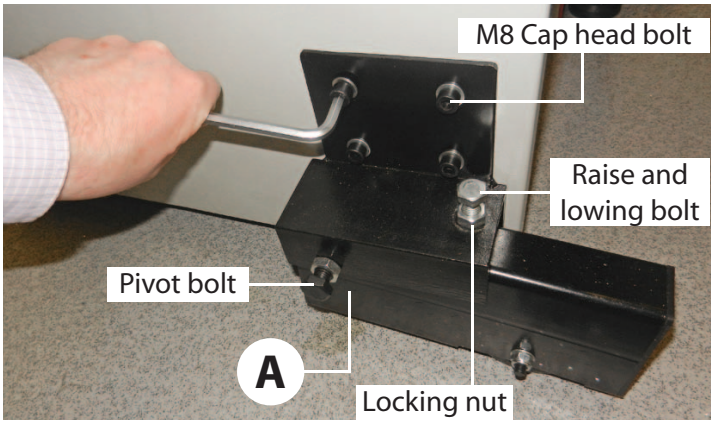


Wheel Mobility Kit

The wheel mobility kit enables the combination machine to be moved easily to a new location. The kit comprises of two adjustable wheel carriages (A) that bolts to each side of the machine, a mobility operating handle (B) and lifting bracket (C). Follow the instruction below to assemble the kit.

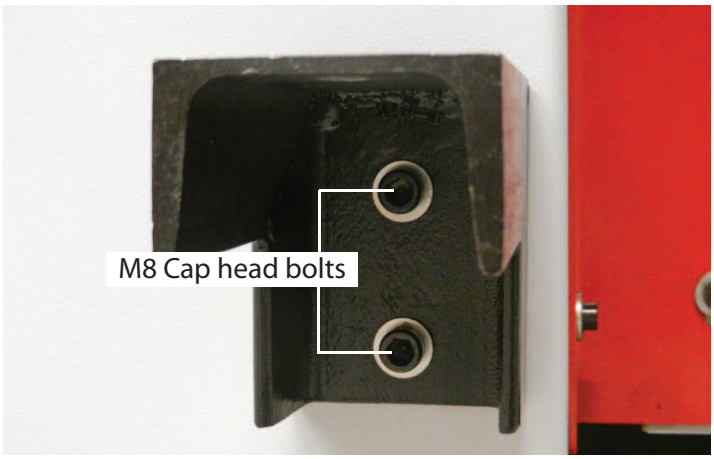
1) Put to hand eight M8 cap head bolts and washers and the two wheel carriages (A). Line up the four holes in one of the wheel carriages mounting brackets with the four threaded holes to one side of the machine and secure using the M8 cap head bolts and washers, see figs 41. Tighten using the supplied Hex key. Repeat for the remaining wheel bracket.

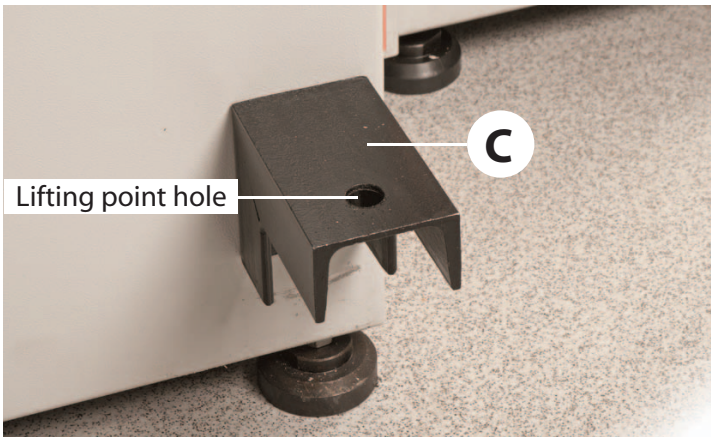
Fig 41



2) Locate the lifting bracket (C) and two M8 cap head bolts and washer. Line up the two pre-drilled holes in the bracket with the threaded holes to the base of the machine and secure in place with the M8 cap heads, see figs 42-43.

Fig 42-43





Positioning the Machine

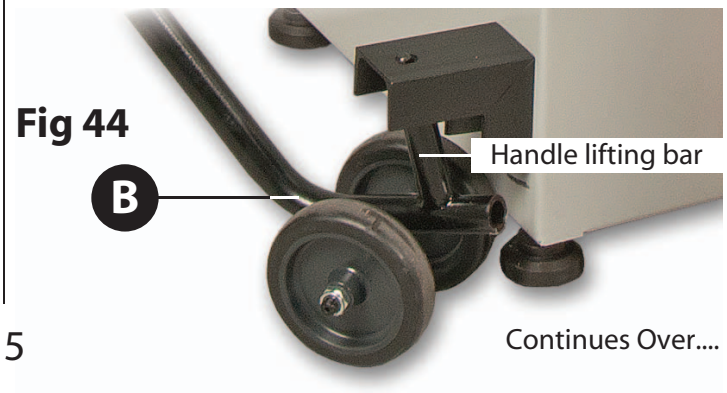
Ascertain the orientation of the machine and move it to its desired position in the workshop. Ensure that the machine is positioned to allow sufficient clearance all round to cater for the maximum length of timber you wish to machine. The machine should be positioned on a flat level surface.

Manoeuvring the Machine

1) Turn the "raise and lowing bolts" on the wheel carriages clockwise until the rear feet are lifted away from the floor then nip up the locking nut to secure the setting.

2) Locate the mobility operating handle (B), insert the handles lifting bar into the hole in the lifting bracket (C), see fig 44 and push down the handle to raise the machine.

Fig 44



Continues Over....

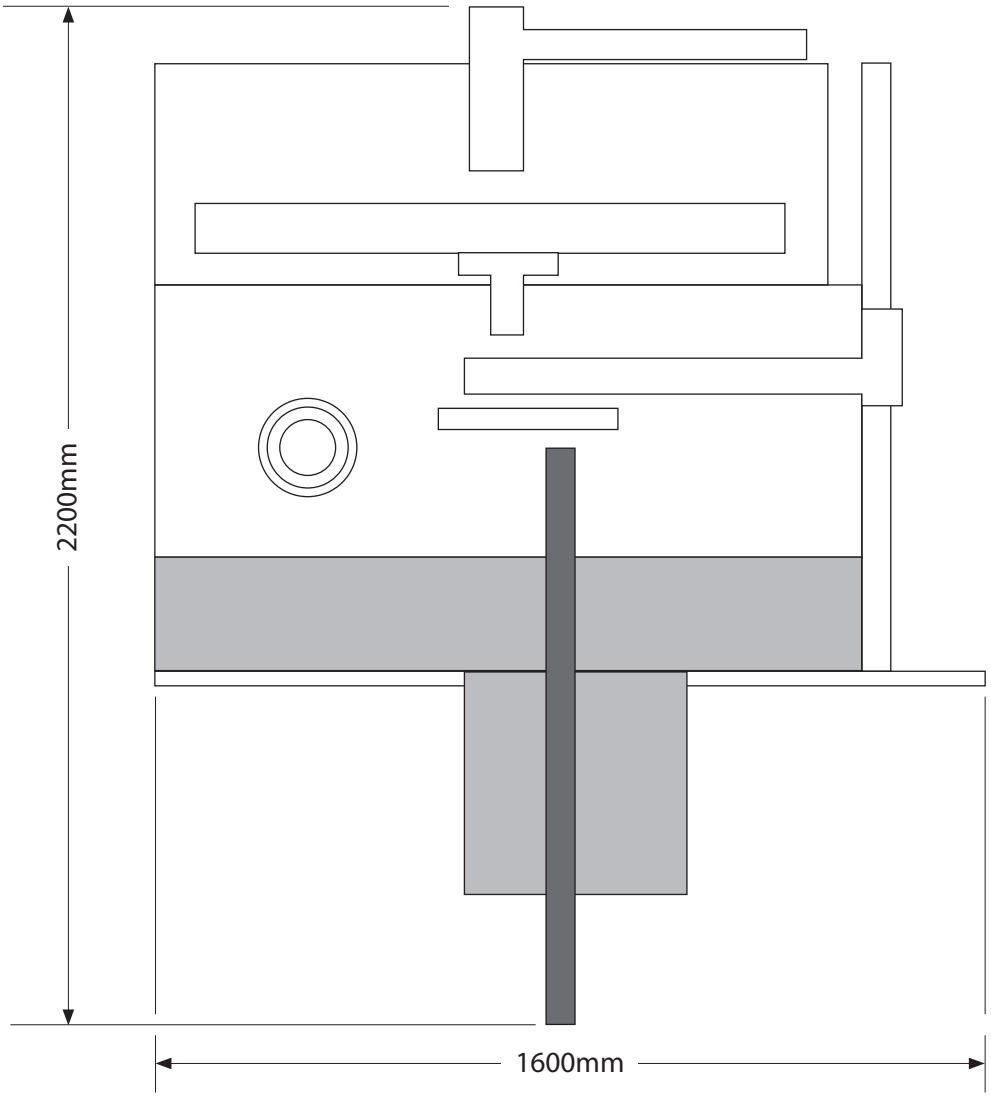
Positioning the Machine

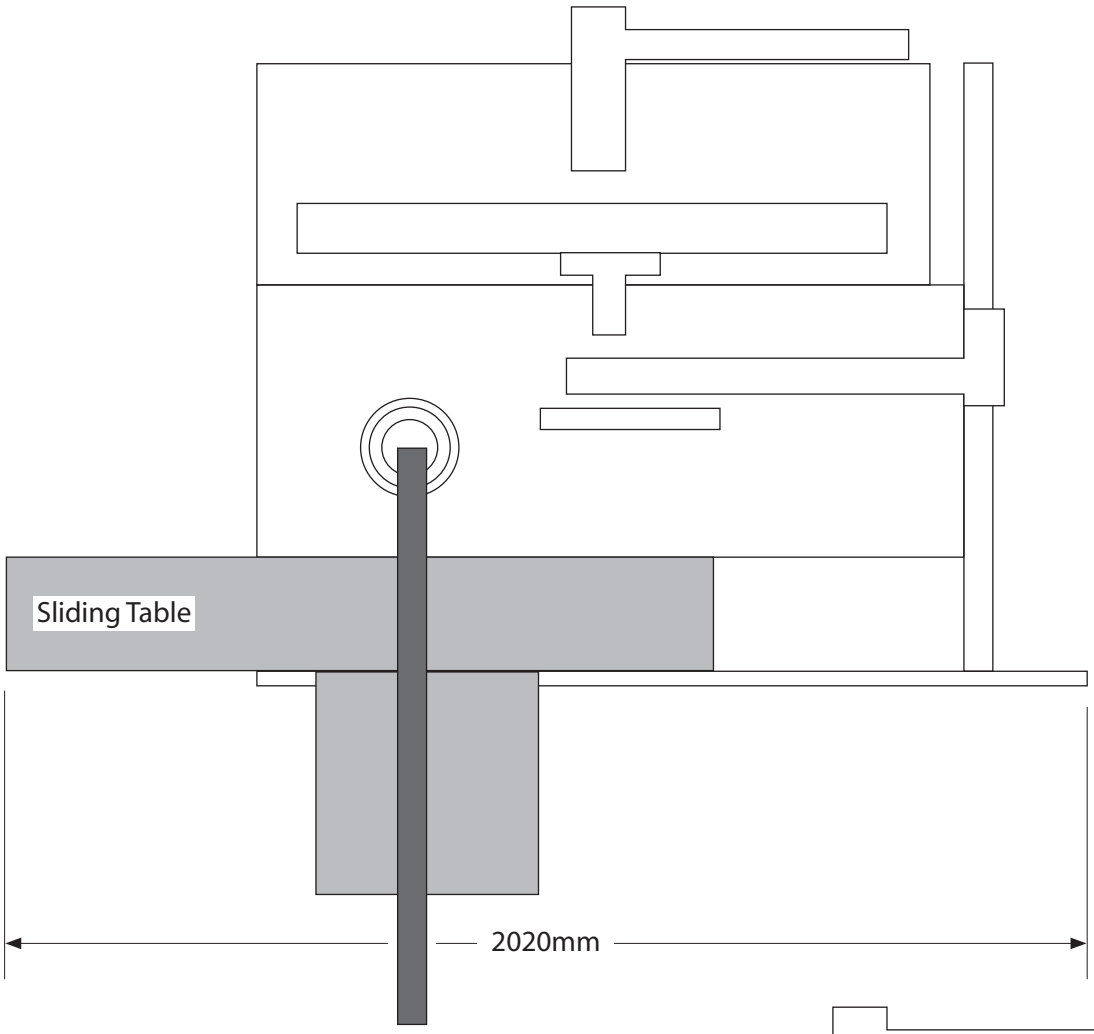
3) Manoeuvre the machine to the chosen location making sure there is sufficient space all round, then carefully lower the machine down, see fig 45.

4) With the machine in position lower the rear feet by loosening the two "raise and lowering bolts", on the wheel carriages (A), fig 41.

Fig 45

Machine Foot Print




Sliding Table
2020mm

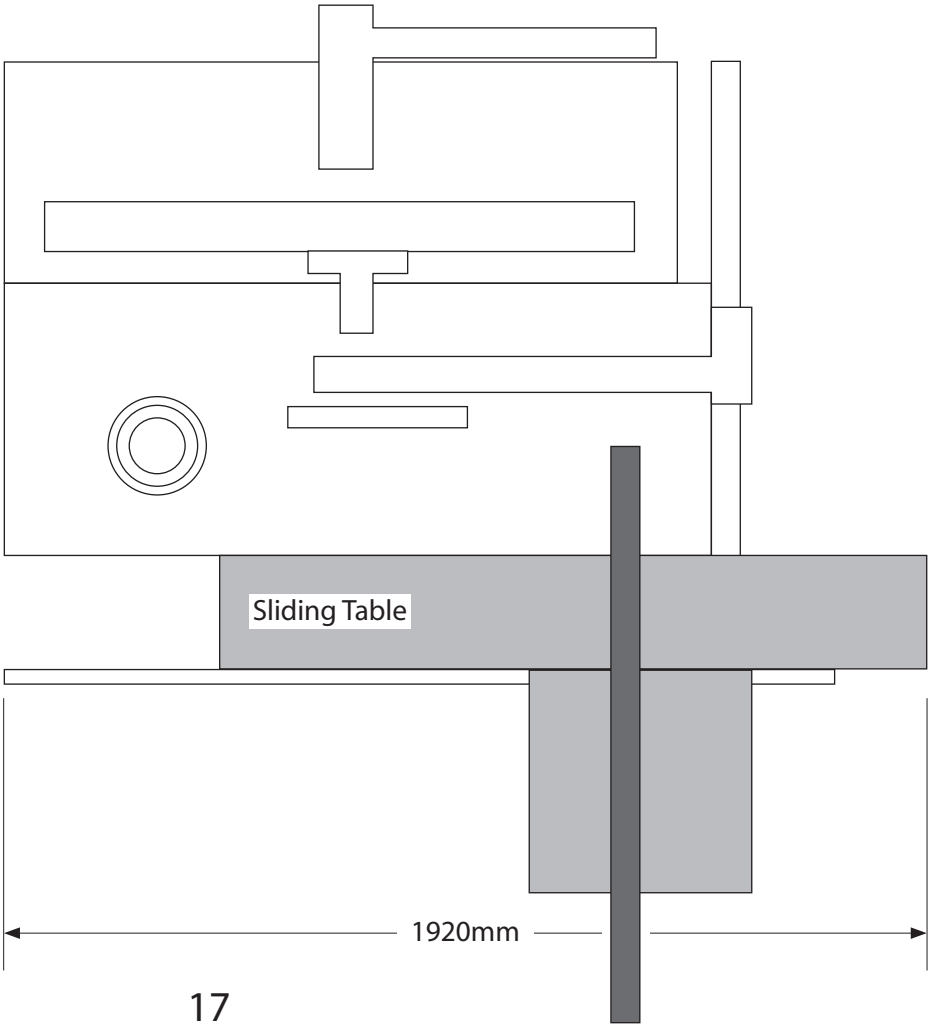
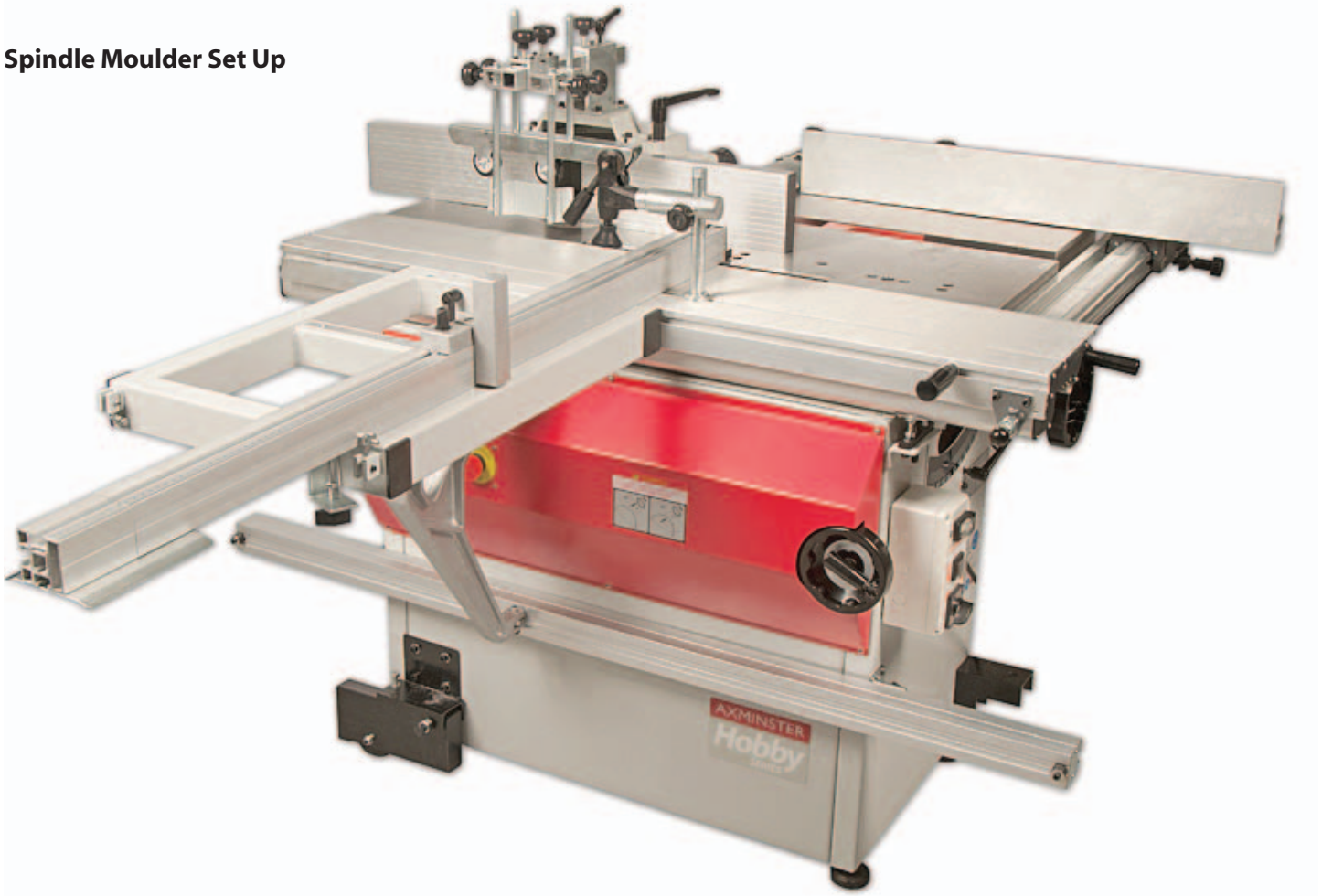
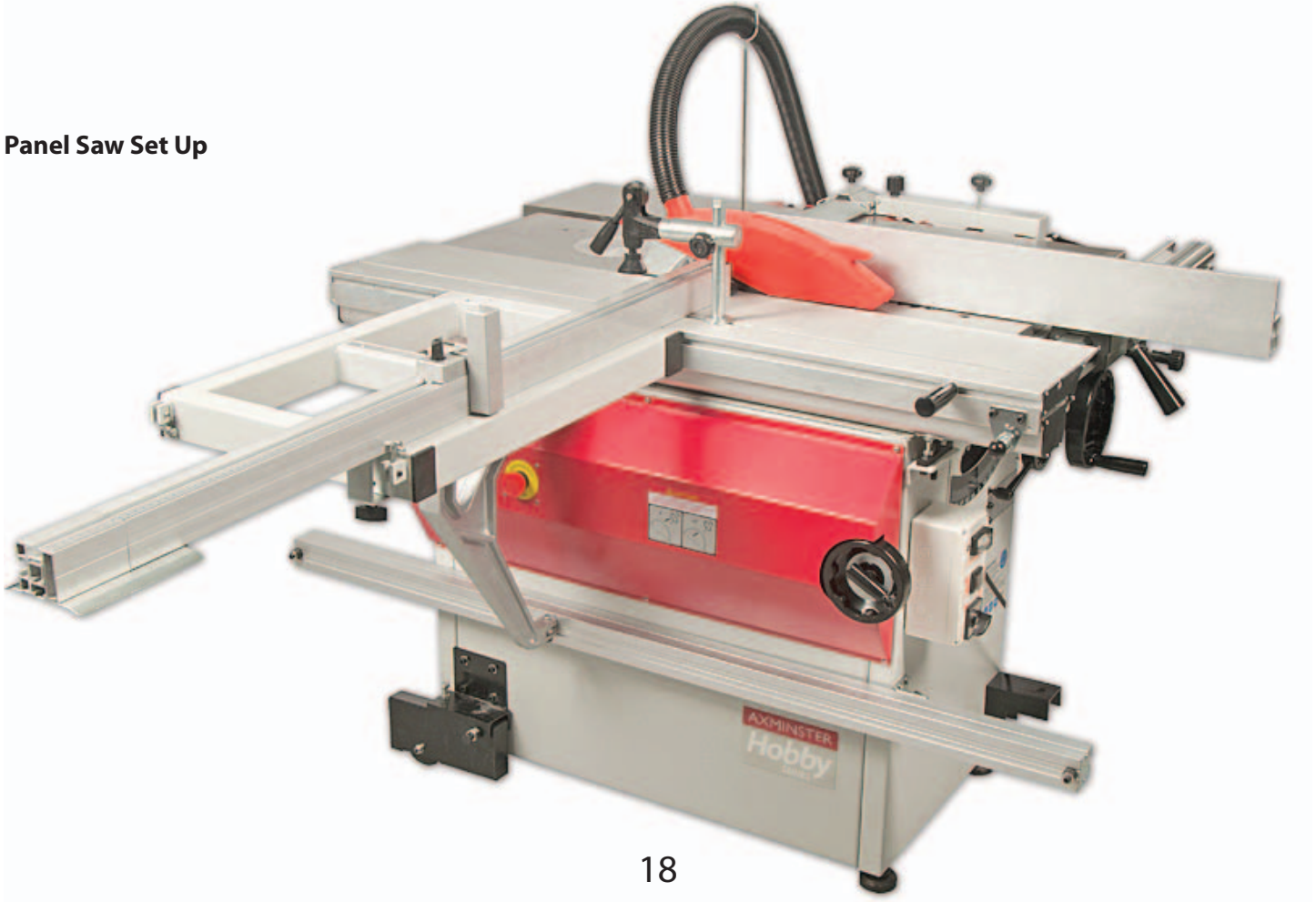

Sliding Table
1920mm

Illustration and Parts Description

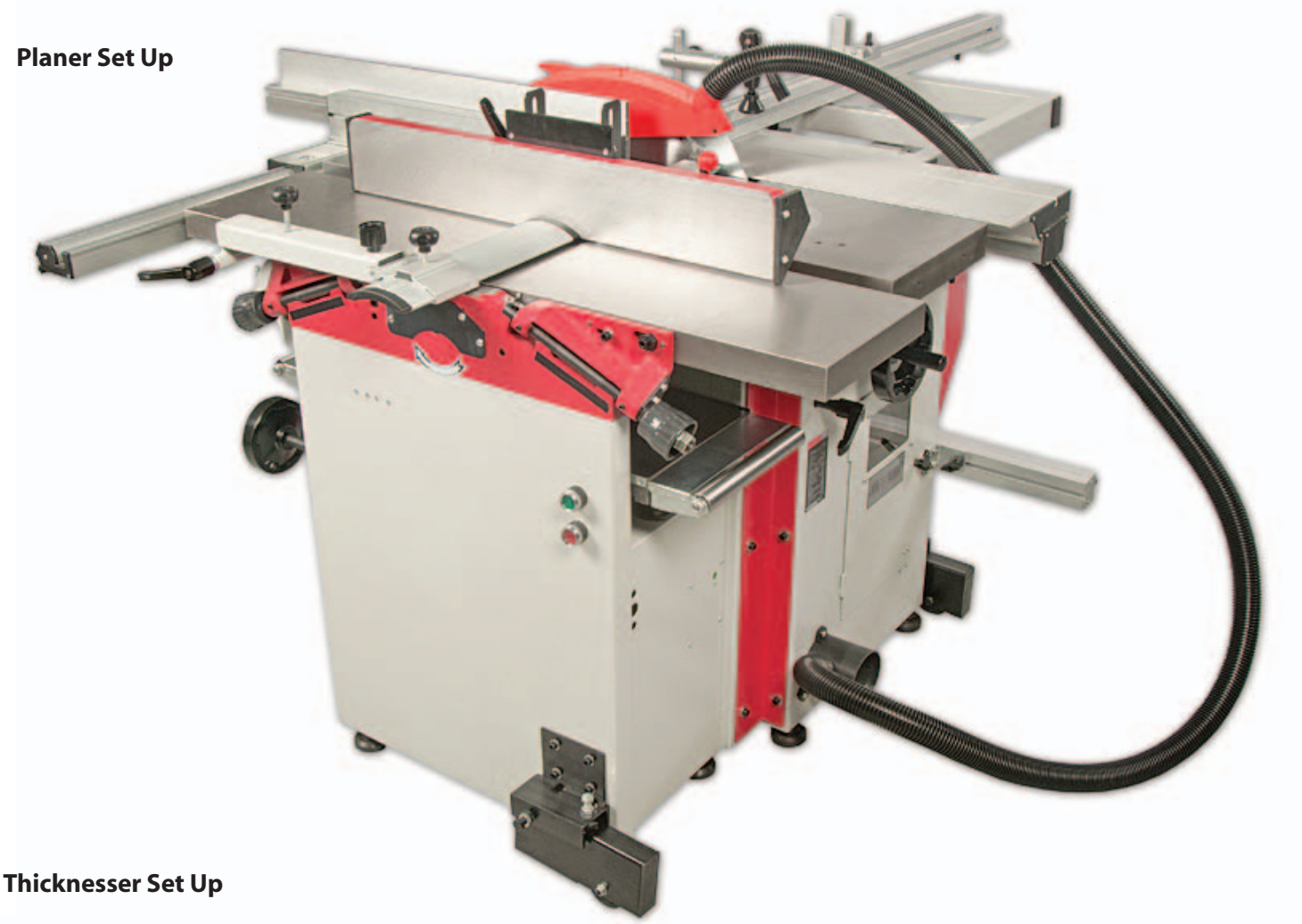
Spindle Moulder Set Up



Panel Saw Set Up



Planer Set Up



Thicknesser Set Up

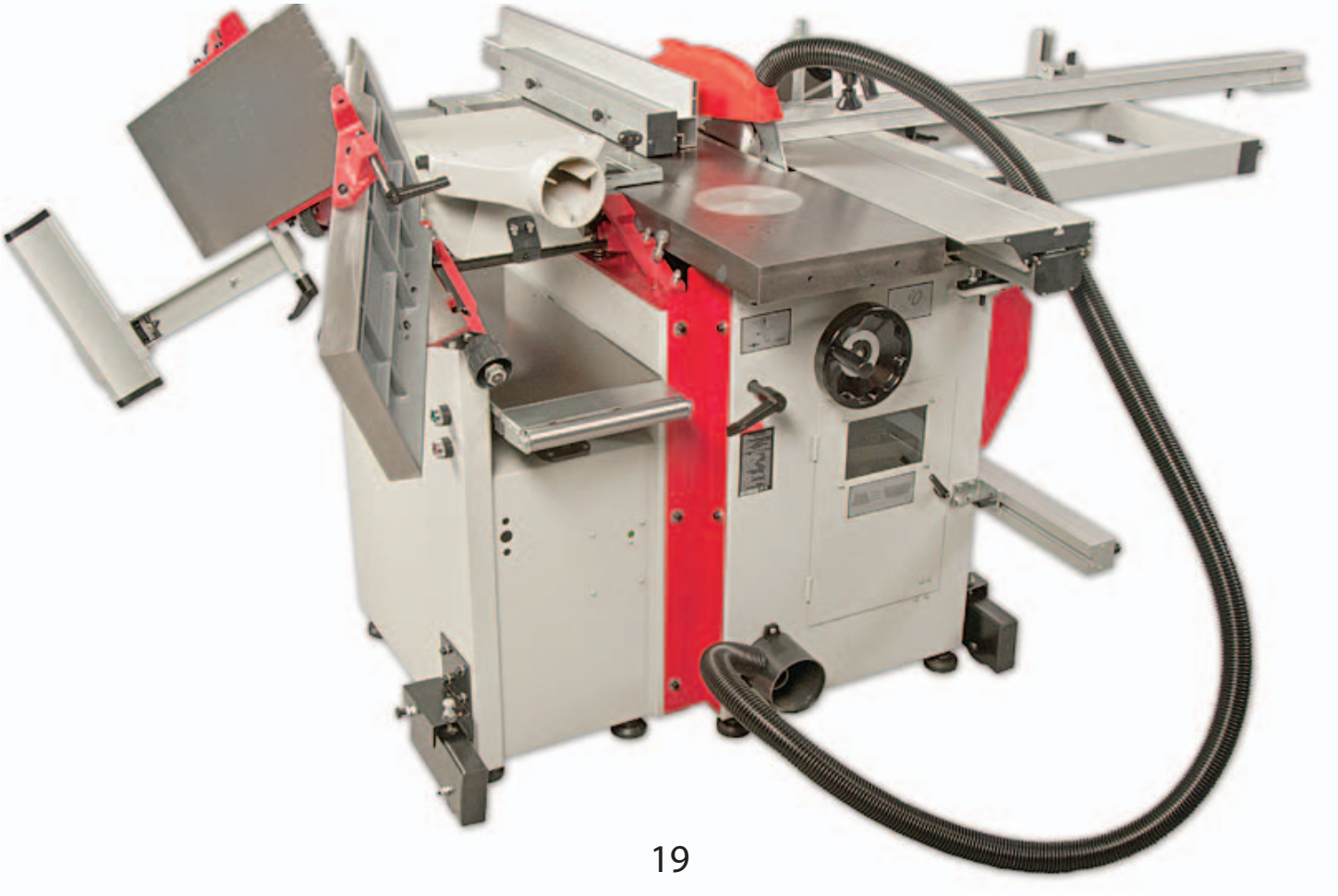
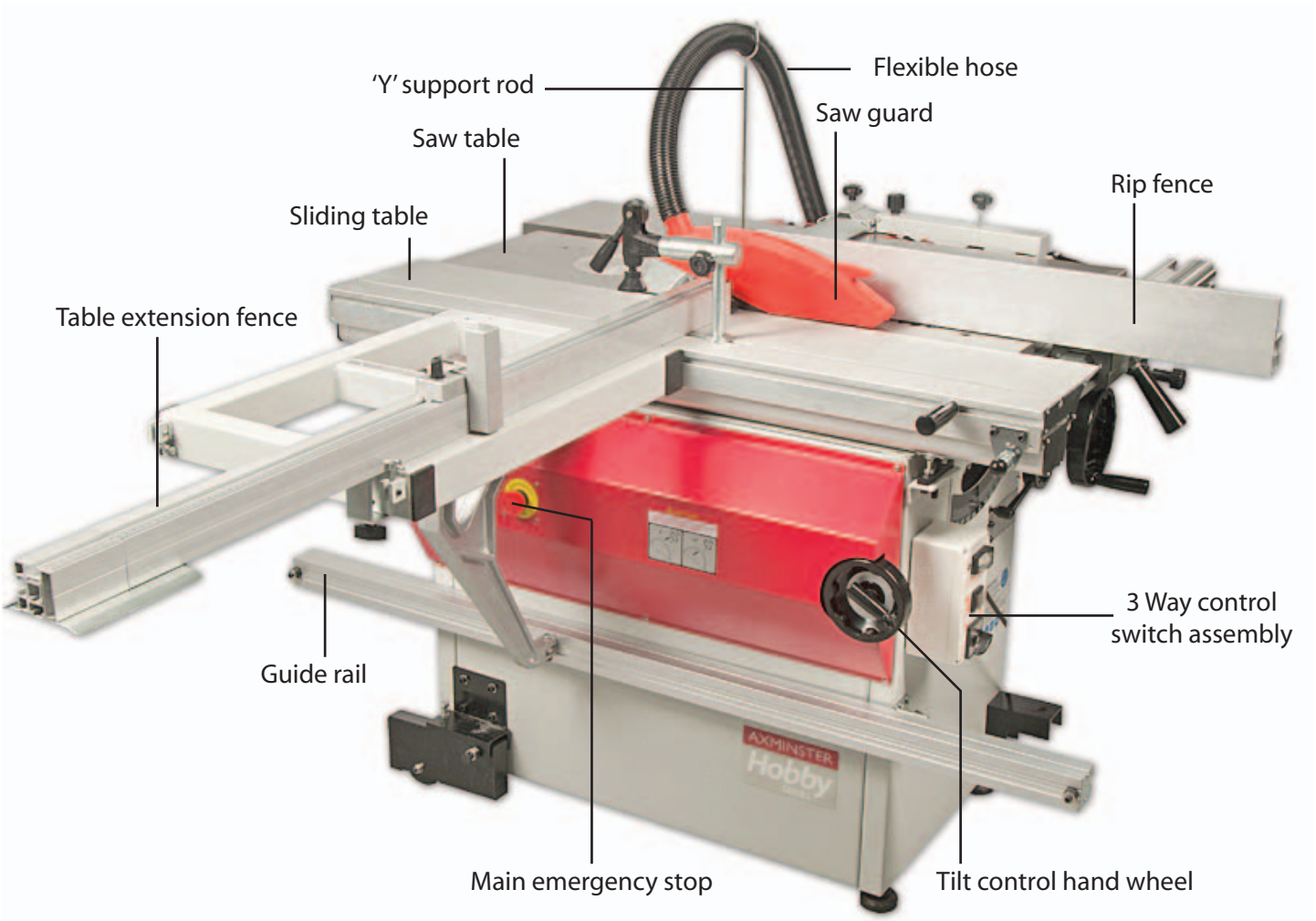
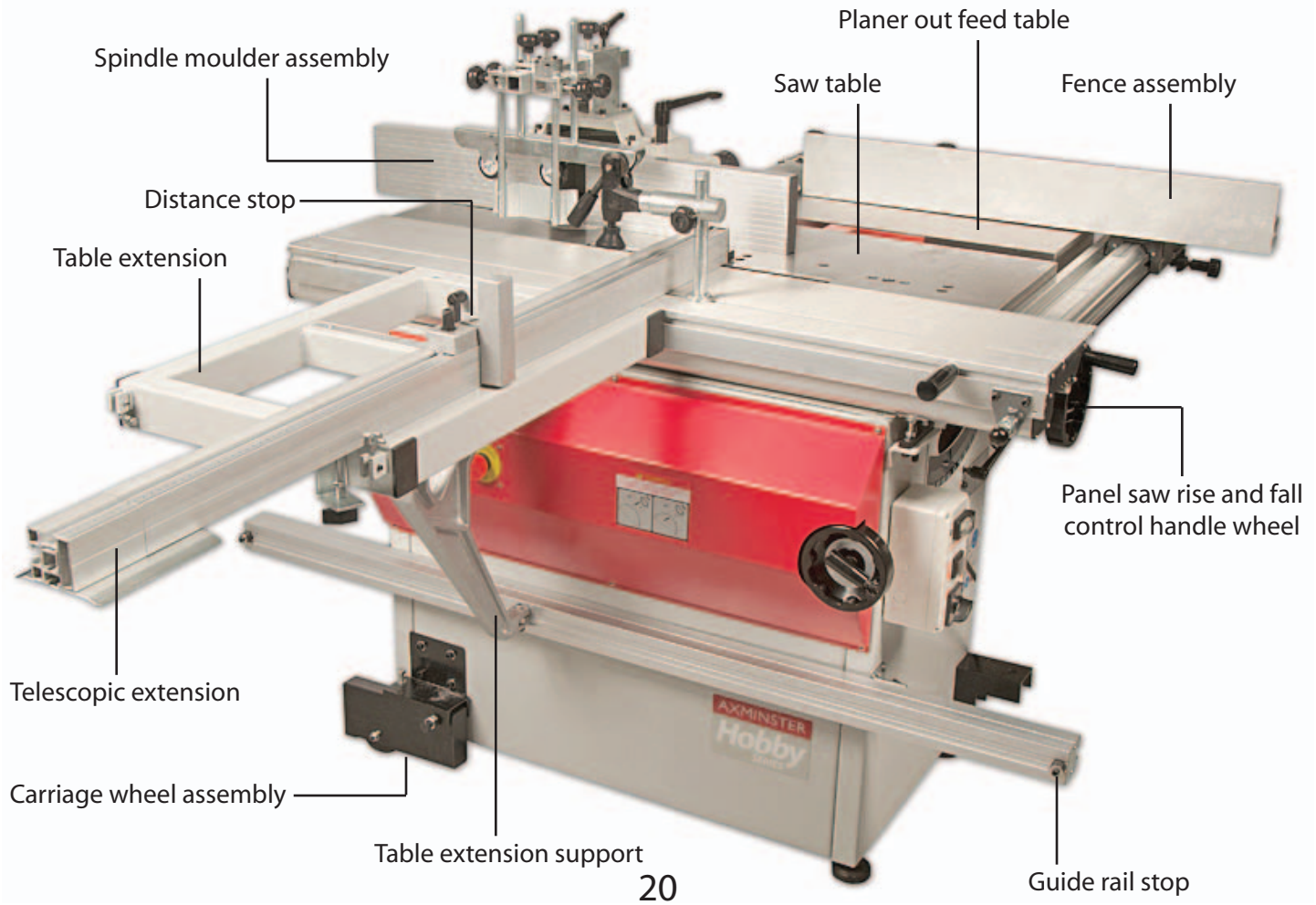
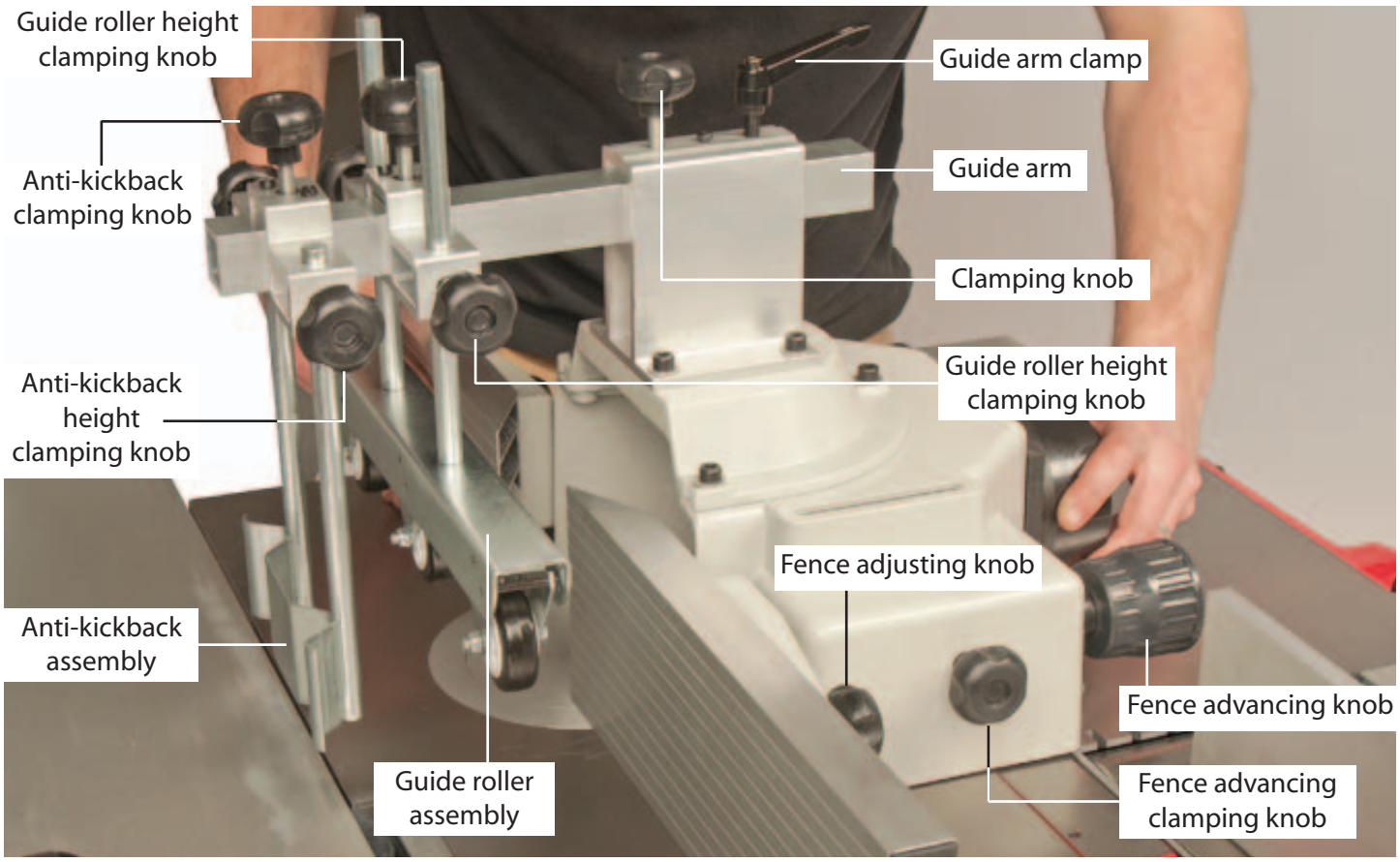
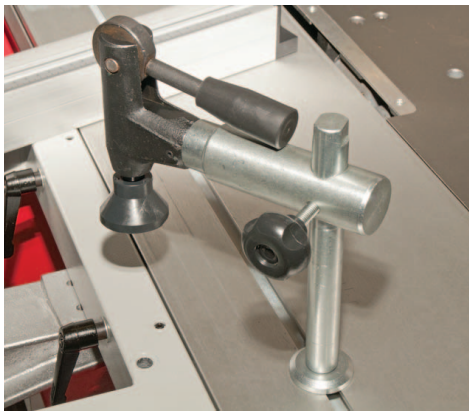


Illustration and Parts Description

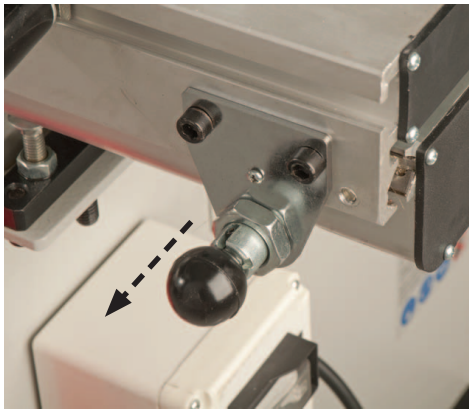








Work clamp



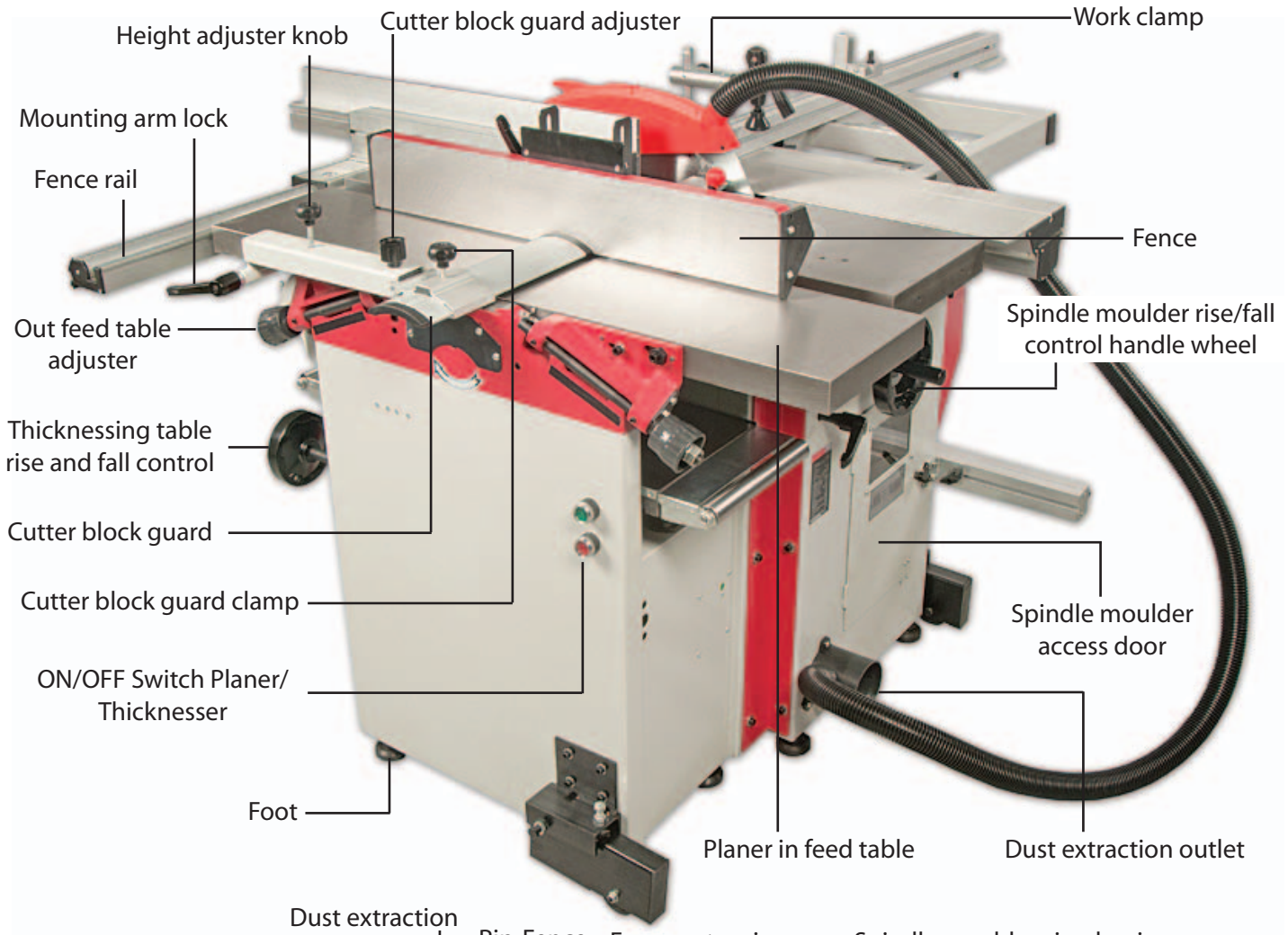
Sliding table locking knob

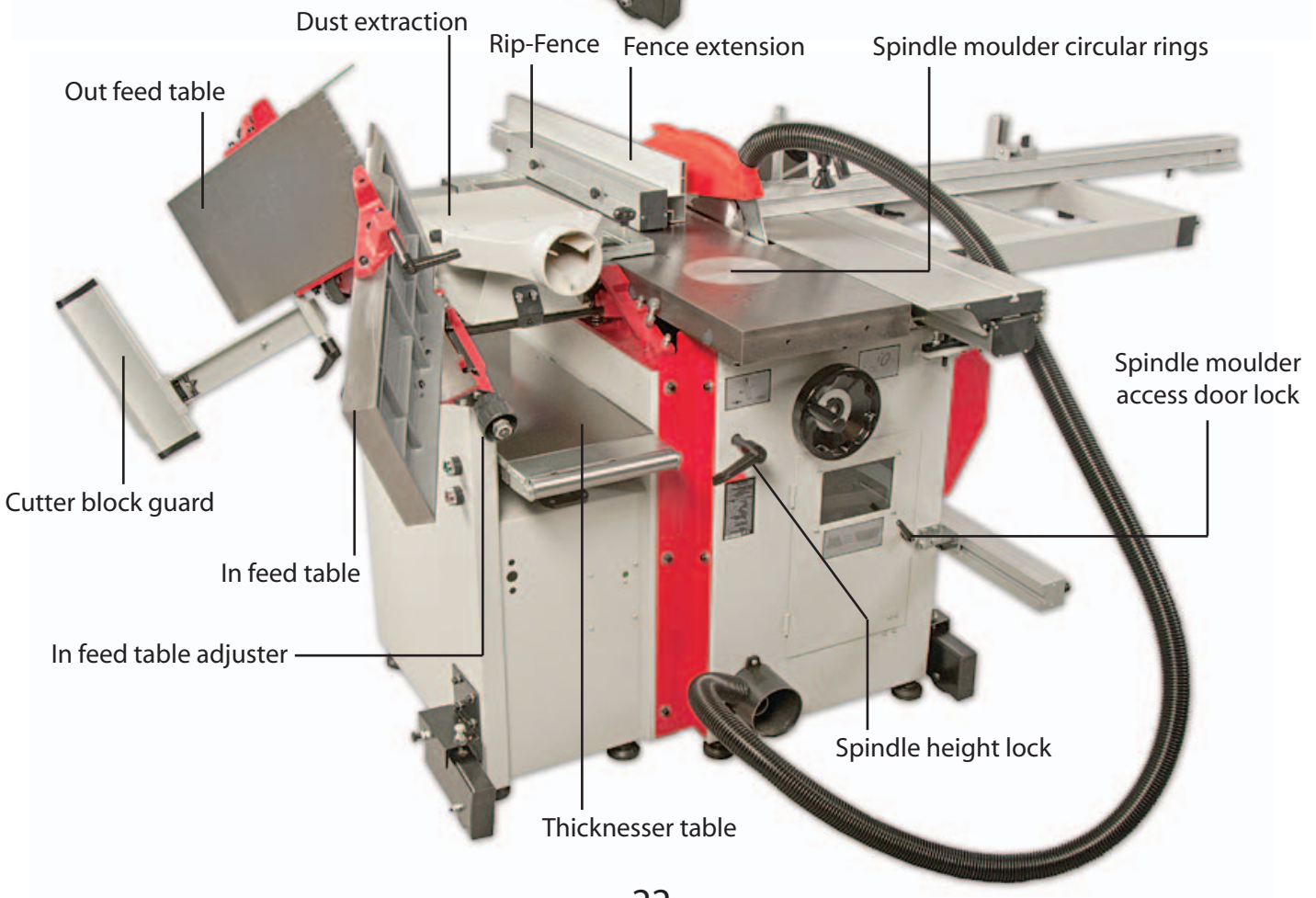
NVR On/Off switch
'O' for OFF
'I' for ON

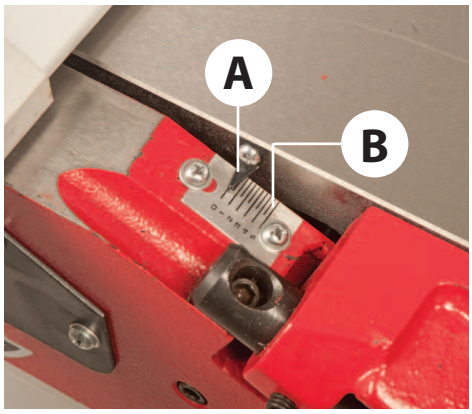
Power selector switch
'R' for Spindle Moulder/ Panel Saw, **'I'** for Planer Thicknesser

Selector switch
'0' No Function
'1' Spindle Moulder
'2' panel Saw

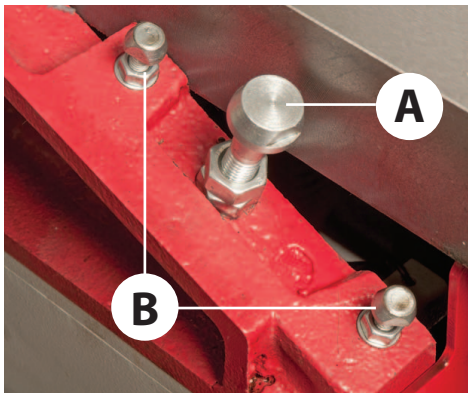
Illustration and Parts Description



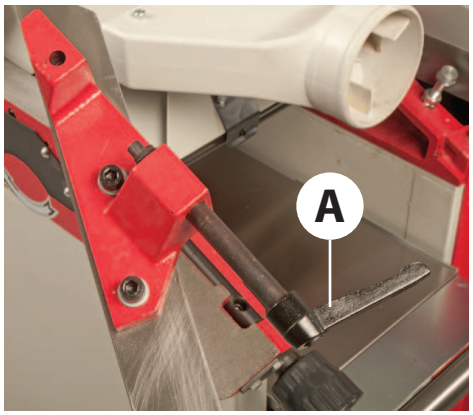




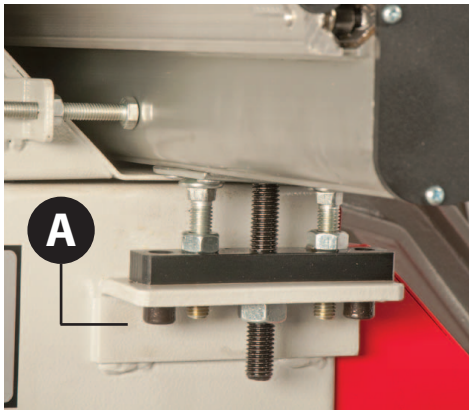
Feed scale overhand (A)
Pointer (B)



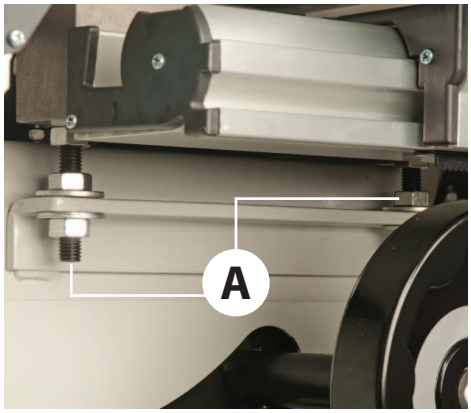
Cam lock (A), Table height locating bolts (B) to level the table with the cutter block blade



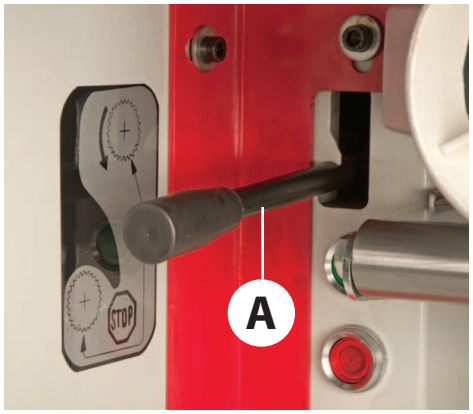
Feed table locking handle (A)



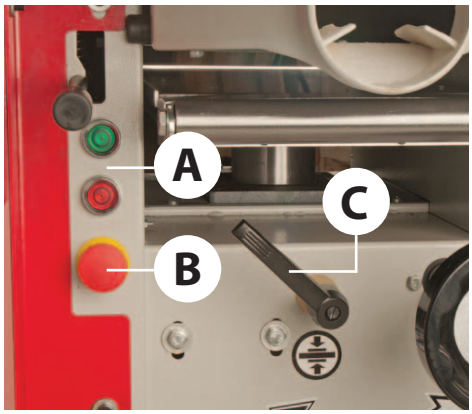
Sliding table height assembly (A)



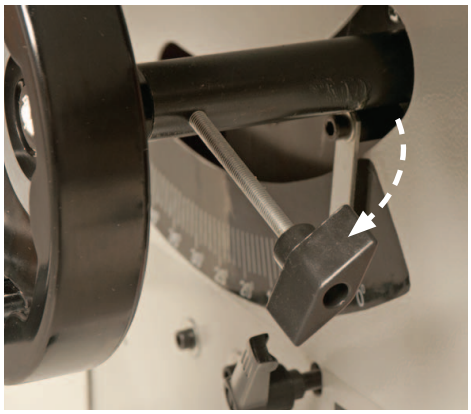
Saw table height adjusters (A)



Autofeed engage control (A)

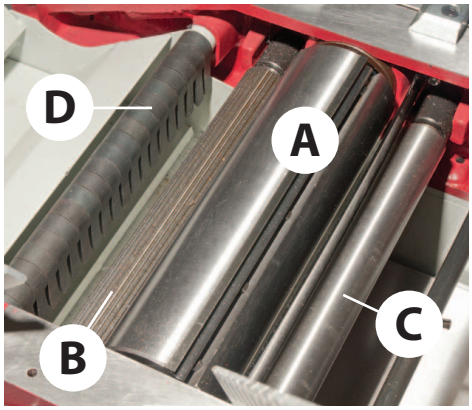


Planer/Thicknesser ON/OFF switch (A)
Emergency stop (B), Rise/Full clamp (C)

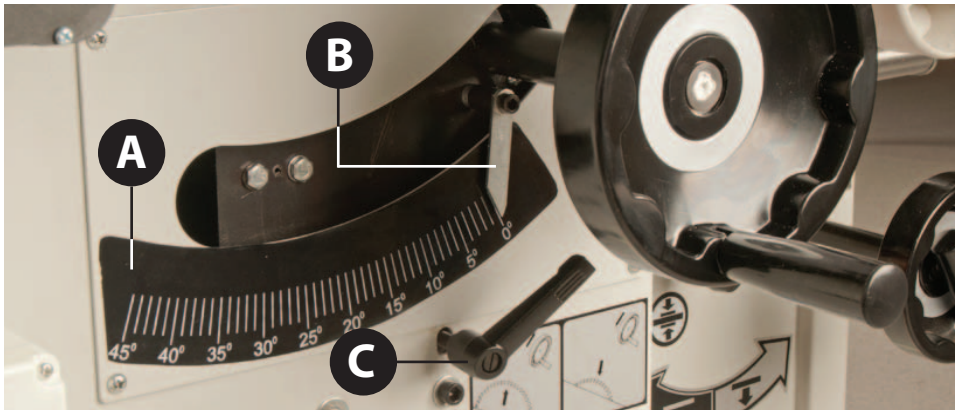


Panel saw rise and fall control butterfly handle lock

Thicknesser rise and full scale

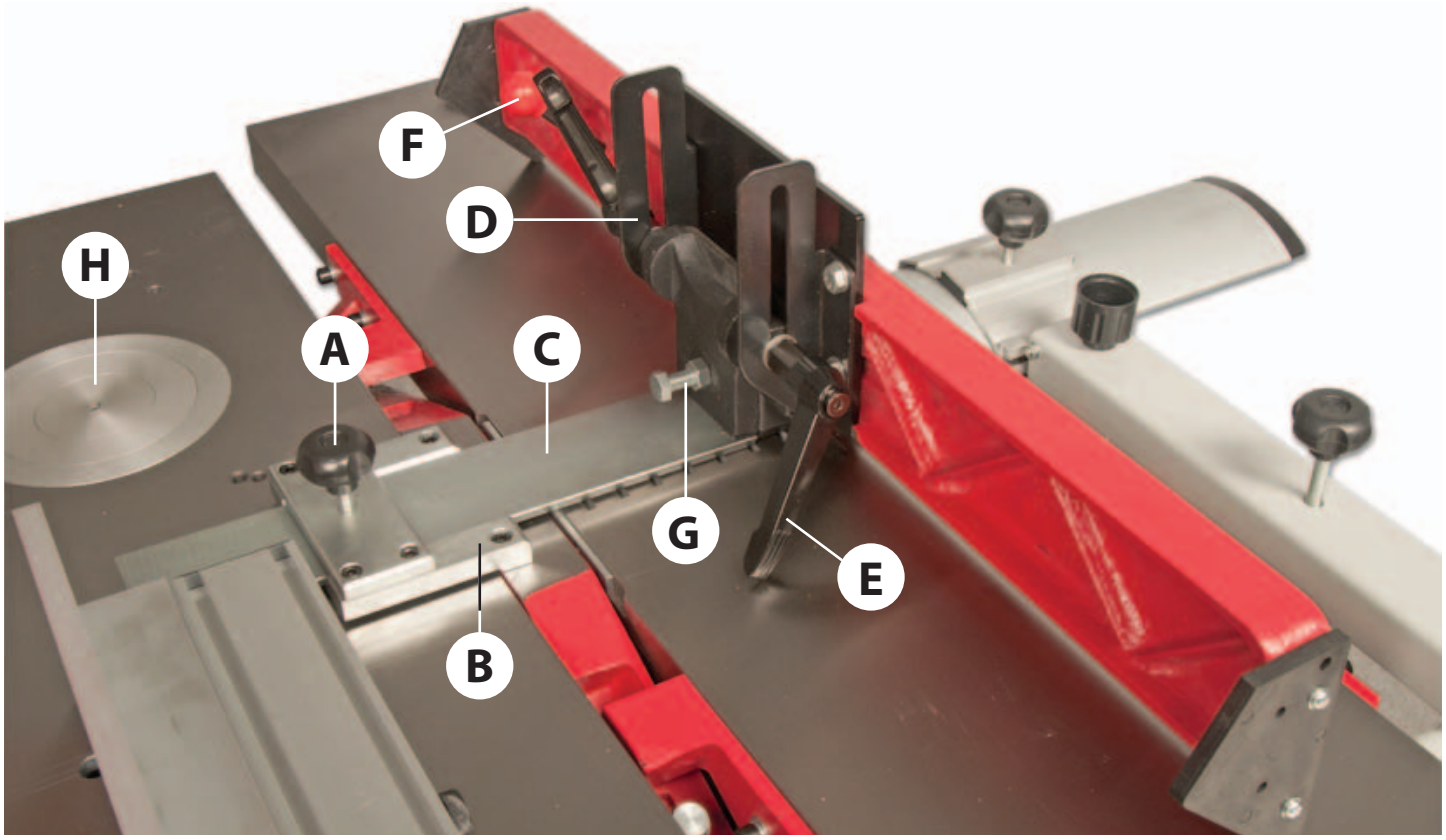


Cutter block (A), In feed roller (B),
Out feed roller (C), Anti kickback fingers (D)

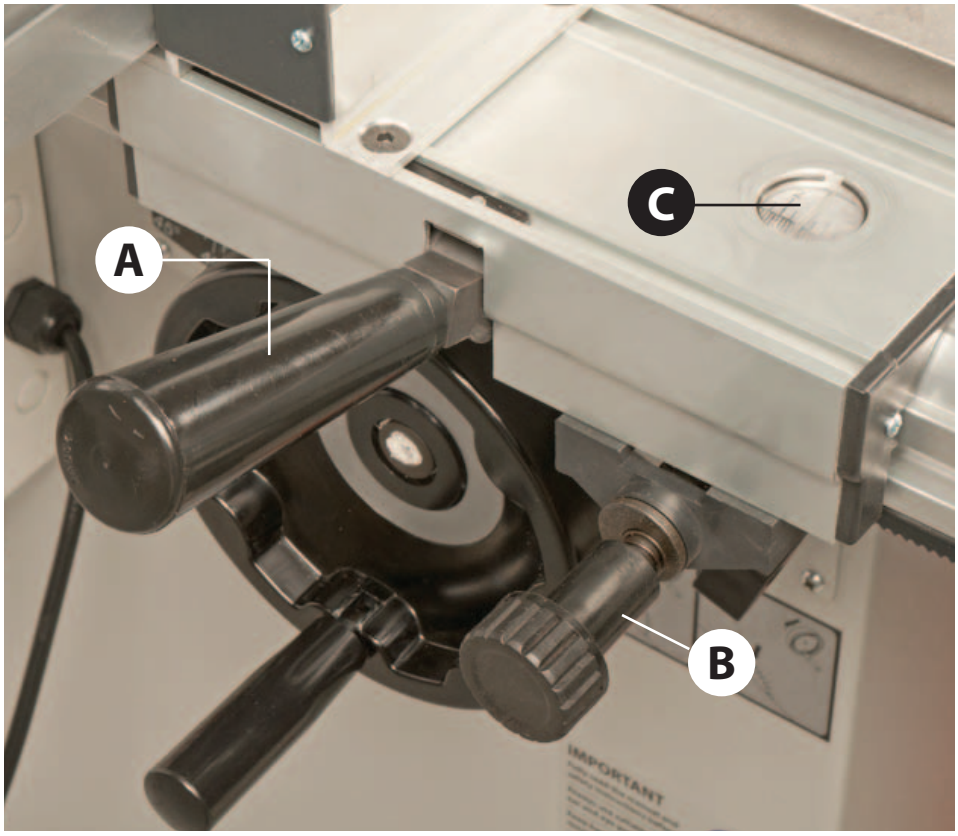


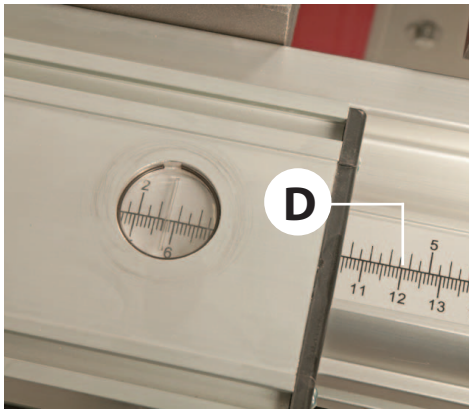
Tilt angle scale (A), Pointer (B), Tilt handle lock (C)

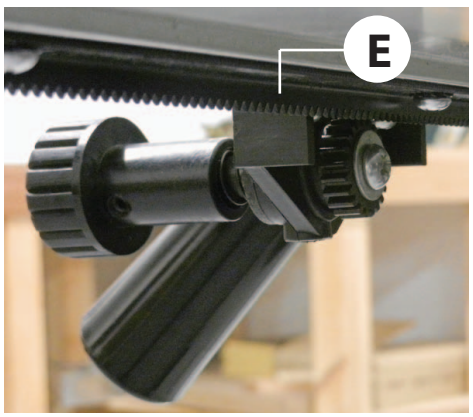
Illustration and Parts Description



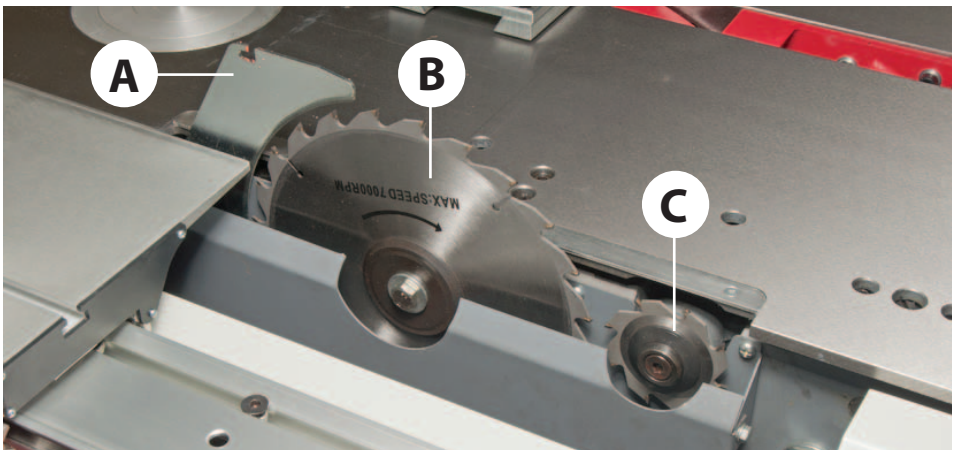
Fence securing clamp (A), Fence mounting bracket (B), Planer fence base (C),
Elongated fence support bracket (D), Fence locking handle (E),
Fence positioning knob lever (F), Fence adjusting bolt (G), Spindle moulder circular rings (H)



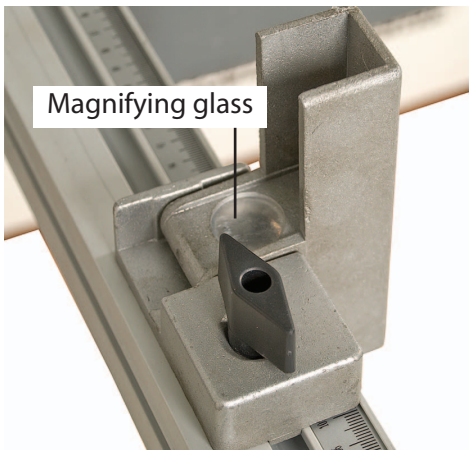




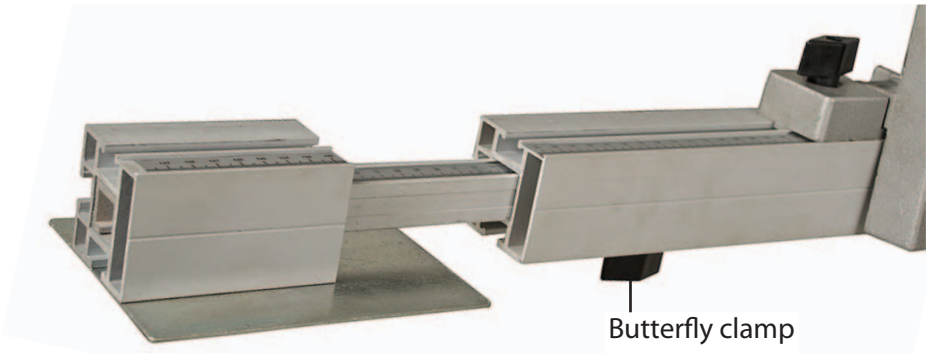
Rip fence locking handle (A), Rip fence micro adjuster (B),
Magnifying glass (C), Fence rail scale (D), Fence rail rack (E)



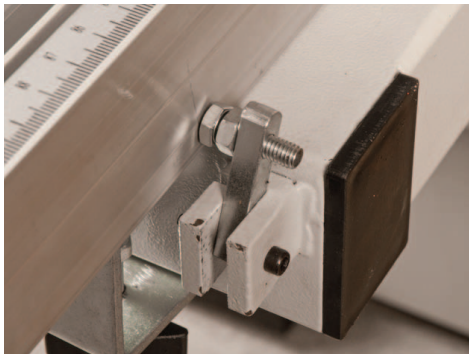
Riving knife (A), Saw blade (B), Scoring blade (C)



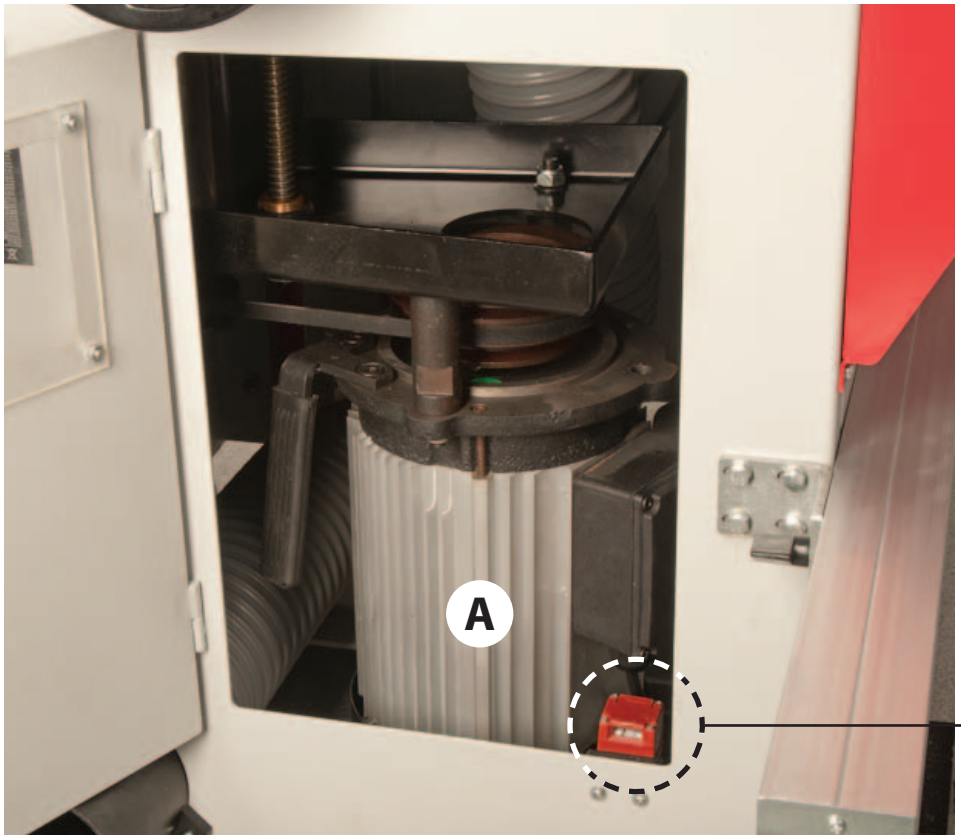
Distance stop assembly



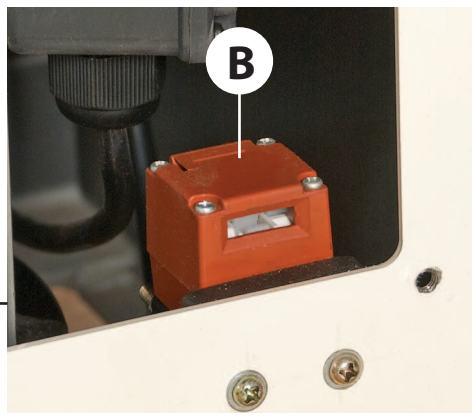
Telescopic extension assembly



90˚ degree extension fence stop



Main emergency stop button



Spindle moulder motor assembly (A) and motor door micro switch (B)

WARNING!! DISCONNECT THE MACHINE FROM THE MAINS BEFORE CONTINUING!

Panel Saw

Raise the blade to its maximum height, check that is upright to the table. Slacken the angle bracket clamp by undoing the butterfly nut (A) and the steel plate pin assembly by loosening the clamping handle (B), see fig 46 and slide the fence up close to the saw blade. Secure the fence again as described above.

Fig 46

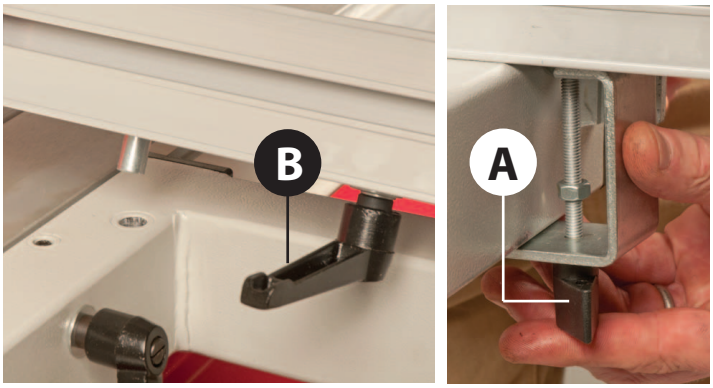
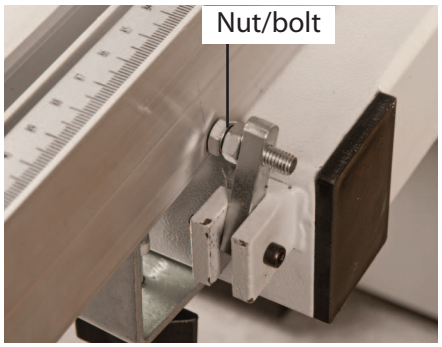


Fig 47



Make sure the extension fence is up against the 90˚ extension fence stop, see fig 47 and using a 90˚ square, place it against the fence and the blade (not on the teeth), check that the angle is correct, if not, adjust the 90˚ extension fence stop nut/bolt until the fence is square to the blade.

Loosen the butterfly nut (A) and handle (B) as described above, slide the nose of the fence (the black tongue) up to the blade, secure. Check the parallelity of the sliding table movement by sliding the table forward and checking the tongue/blade are still in contact, or that the movement has not jammed the tongue against the saw. If there is a slight discrepancy, it may be acceptable to you (a 1mm difference across the face of the blade (fully extended) is about one quarter of a degree).

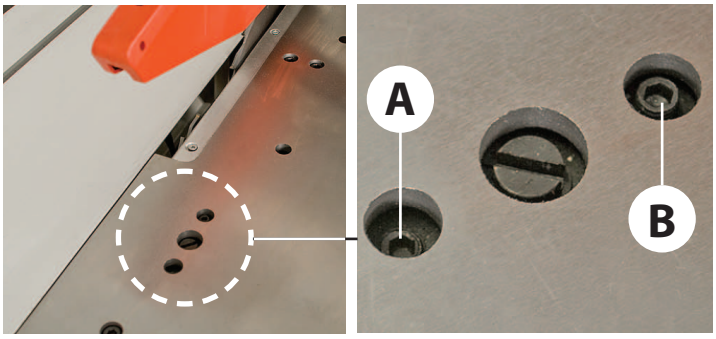
Tilt the blade fully over. Using a mitre square, set the angle of the saw to 45˚. Check that the index mark gives a corresponding reading against the scale. Adjust the pointer if necessary. Reset the blade upright, check that the angle scale reading is correct. Set the rip fence a predetermined distance from the saw blade and lock in position. Check that the rip fence is held securely when it is locked in position. If the locking appears a little 'slack', adjust the position of the clamping lug at the rear of the rip fence by tightening the nut.

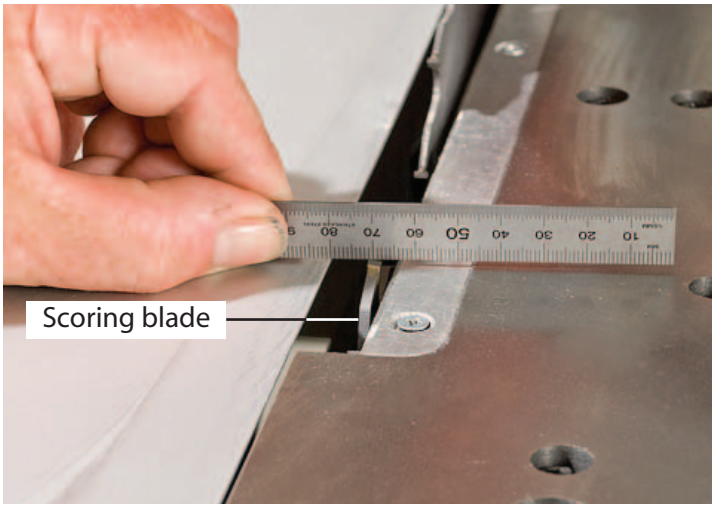
Setting Scoring Blade

90˚ Degrees

Lower the saw assembly with the Rise and fall control hand wheel until the scoring saw is just below the table, using a straight edge adjust the cap head screw (A), set the saw blade to the desired height using the Hex key provided, turn (clockwise to raise the blade and anti-clockwise to lower the blade), until the scoring saw is level with the table, then recheck the height of the scoring and adjust to 1 or 2mm if required. Lock the scoring blade in position using the cap head screw (B), see figs 48-49.

Fig 48-49





45˚ Degrees

With the blade assembly at 90˚ degrees, turn the cap head screw (A) one and half turns anticlockwise, (you may need to change to get the desired scoring blade height). Lock the scoring blade in position using the cap head screw (B). Lower the saw assembly until the scoring saw is just below the table. Then tilt the blade assembly until it reads 45˚ degrees on the tilt angle scale, check that the scoring

blade is sitting just proud of the table, see fig 50.

Fig 50

NOTE: If you change the main blade saw blade at anytime, the kerf width of the replacement blade must be slightly narrower, (3.2mm) than the kerf width of the scrolling blade.

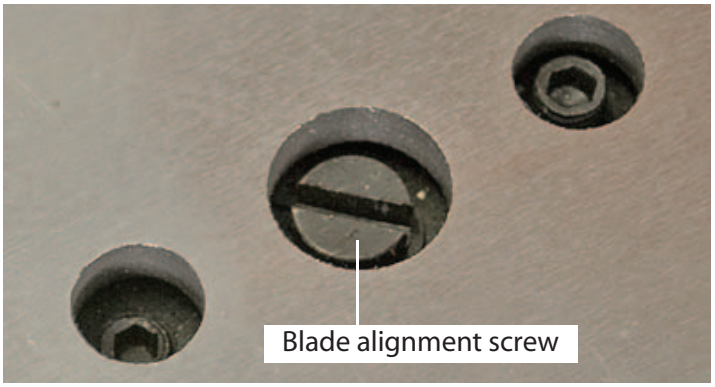
With the blade assembly at 90˚degrees, turn the cap head screw (A) one and half turns anti-clockwise. Lock the scoring blade in position using the cap head screw (B). Lower the saw assembly until the scoring saw is just below the table.

Tilt the blade assembly until it reads 45˚degrees on the tilt angle scale, check that the scoring blade is sitting just proud of the table.

Alignment Screw

Turn the alignment screw as required to align the scoring blade with the main blade, see fig 51.

Fig 51



Check that everything that should be tight, is tight; saw blade guard, rise and fall lock mechanism, fence clamps etc.

Connect the machine to the mains supply, press the power selector switch to the 'I' position for spindle moulder/panel saw, turn the selector switch to '2' panel saw (see page 21) and give the machine a quick burst. i.e. On/Off. Check that everything is sound and feels O.K. (No knocking, scraping, belt squeal, rubbing etc.,)

Reconnect the mains, give the machine a longer run, and press the emergency stop button on the front of the machine. Check that the blade comes to a complete stop. When you are happy that everything seems OK, switch the machine off, disconnect from the mains supply.

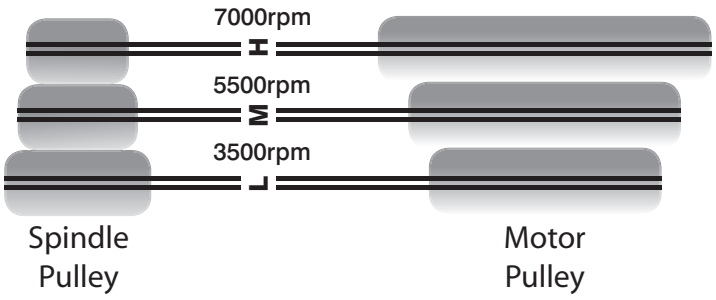
Spindle Moulder

WARNING!! DISCONNECT THE MACHINE FROM THE MAINS BEFORE CONTINUING!

Spindle Speed Setting

The spindle speed must be selected according to the cutting diameter. The speed is set by changing the V-belt location on the pulleys, see diagram below.

Upper location (H)....7000rpm Centre location (M)....5500rpm Lower location (L)....3500rpm



PLEASE NOTE: If the spindle speed is set at (3500rpm) and the tool diameter is smaller than 120mm there is an increased risk of the work piece kicking back at you!

The Cutting Tool

The cutting tool may only be changed when the spindle rotation lock is engaged and the mains plug is pulled.

There is a risk of personal injury by cuts from the cutter knives. Wear suitable gloves when changing cutters.

Clean all surfaces of cutters and spindle arbor with a suitable solvent.

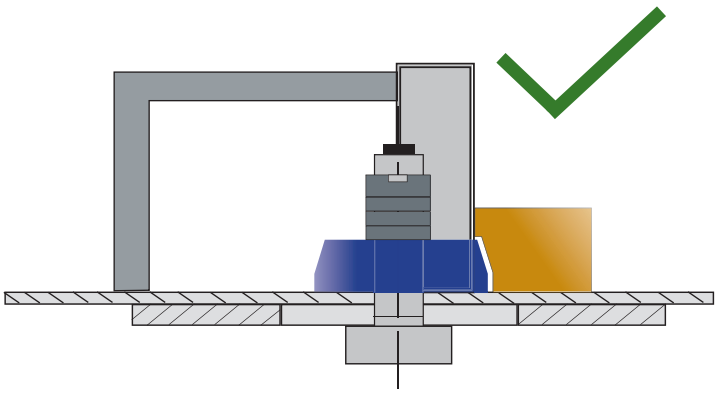
Only use tooling with manual feed cutter blocks marked "MAN".

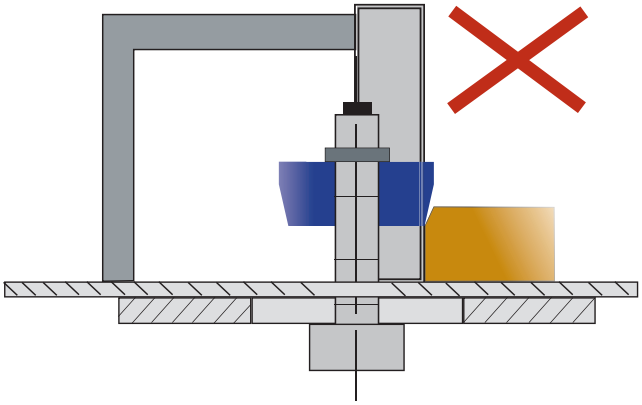
Continues Over....

Unsuitable, incorrectly mounted, dull, cracked or bent cutter knives can break or increase the risk of kickback considerably.

The installation of sanding or polishing tools is not permissible.

The cutter block must be positioned on the arbor as low as possible, see diagrams below.





Watch the direction of rotation (counter-clockwise) when mounting the cutter.

Fill the space between cutter and clamping washer with spacing collars.

Tighten the arbor cap head screw securely.

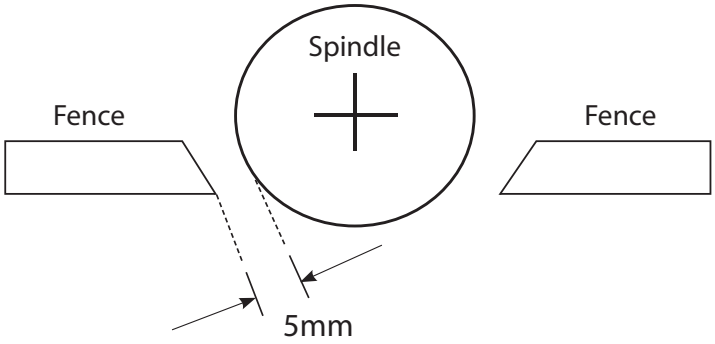
Don't use a wrench extension or a hammer to tighten the cap head screw.

Cover the clearance zone around the cutter with table insert rings, see figs 35-36-37.

Setting the Fence

Adjust the position of the fence assembly to give both the required cutter protrusion and adequate clearance between the cutter and the fence.

Close up the aluminium fences to give approximately 5mm clearance around the cutter, see diagram below.



The fence is used to guide small work pieces through the cutter without them being trapped between the fence and the cutter.

The top cover should be kept closed when the machine is in operation; it can be opened to give access to the cutter when the machine is stationary.

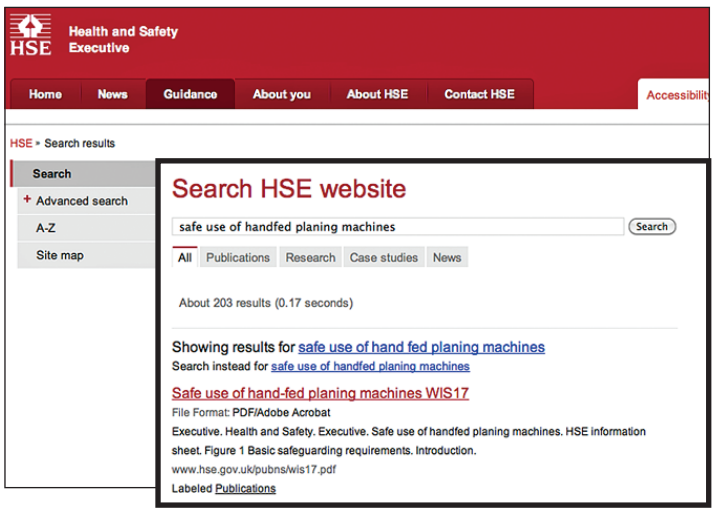
The dust extraction hose is connected to the aperture at the rear of the fence casting.

Before starting work, carefully check that the cutter can rotate freely without fouling the inside of the guard and that the guard is clamped firmly in place.

Operating Instructions

Planning Function

To operate the planer correctly, it is recommended to read the HSE (Health and Safety Executive) information working sheet on the safe use of handfed planing machines, see image below.



Power On Procedure:

1) Rotate the selector switch (A) in the vertical position.

2) Press the selector switch (B) to select the planer/thicknesser icon (I).

3) Press the NVR ON/OFF switch (C) to the "ON" position, then press one of the green "ON" buttons to start the machine, see figs 52-53.

Thicknessing Function

- Rotate the cutter guard arm out of the way.
- Remove the fence assembly.
- Unlock the in feed/out feed tables, rotate to the side.
- Use a honing guide to sharpen the blades.
- Rotate the dust extraction hood.
- Measure the timber thickness, raise the thicknessing table & reading against the scale, until the desired measurement is reached and lock the table in position.
- Release the main emergency stop button on the planer/thicknesser.

Power On Procedure:

1) Rotate the selector switch (A) in the vertical position.

2) Press the selector switch (B) to select the planer/thicknesser icon (I).

3) Press the NVR ON/OFF switch (C) to the "ON" position, then press one of the green buttons to start the machine, see figs 52-53.

Fig 52

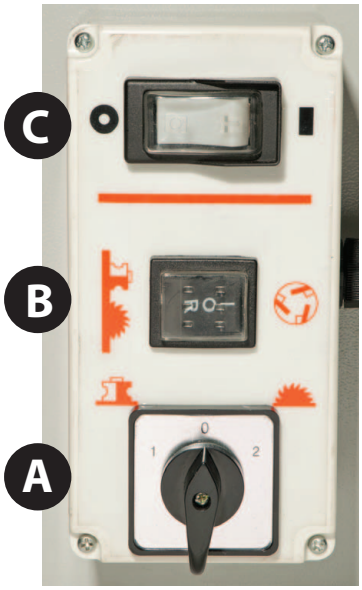
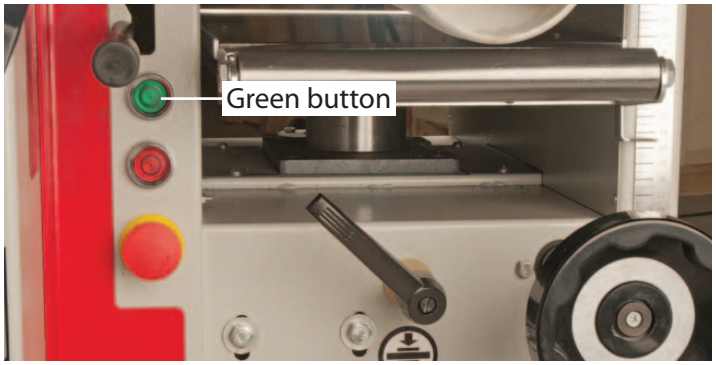
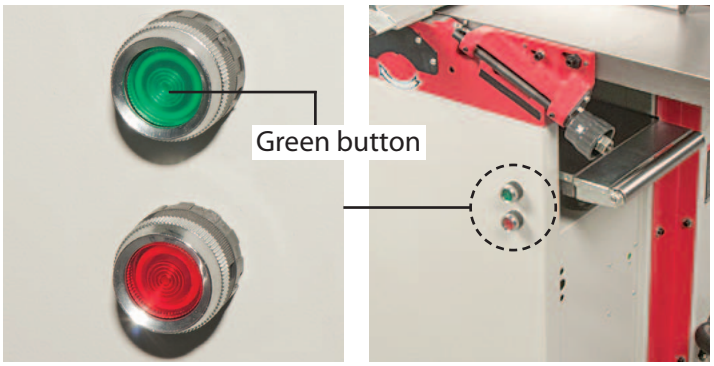


Fig 53





Spindle Moulder Function

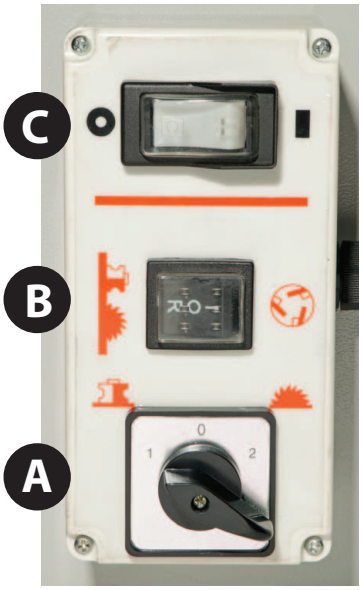
Power On Procedure:

1) Rotate the selector switch (A) to the spindle moulder icon (1).

2) Press the selector switch (B) to select the spindle moulder/panel saw icon (R).

3) Press the NVR ON/OFF switch (C) to the "ON" position, to start the spindle moulder, see fig 54.

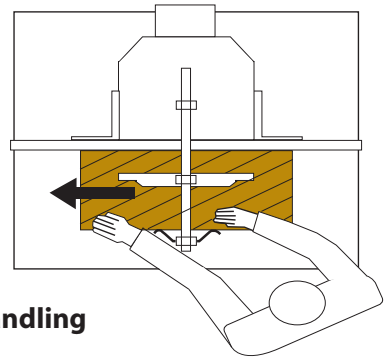
Fig 54



Continues Over....

Correct Operating Position

Position yourself offset to the machine as shown above



Work Piece Handling

•Feed the work piece straight across the machine table, holding the fingers close together and guiding the work piece with the palms of your hands.

•Never put your hands under or behind the cutter guard.

•Always keep your hands well clear of the rotating cutter.

•Always feed the work piece against the cutter rotation as shown by the arrow in illustration.

•Use a push stick when working the ends of narrow stock.

•Use a feeding aid if you are going to machine a work piece shorter than 300mm.

•Always machine the work piece over its entire length.

Recess machining may only be carried out with the aid of suitable longitudinal work piece stops.

•When working complex shapes, make jigs and guides to guide the work piece properly and safely.

•Make trial cuts on a piece of scrap before working the actual work piece.

•Support long work pieces with roller stands or table extensions.

•Always work one work piece at a time.

Panel Saw Function

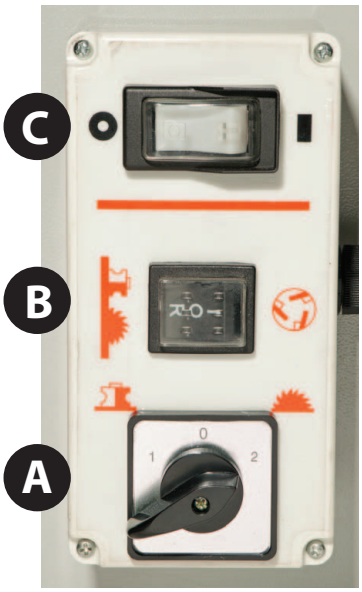
Power On Procedure:

1) Rotate the selector switch (A) to the panel saw icon (2).

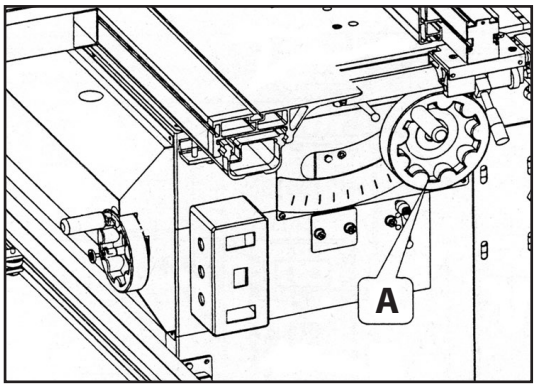
2) Press the selector switch (B) to select the spindle moulder/panel saw icon (R).

3) Press the NVR ON/OFF switch (C) to the "ON" position, to start the panel saw, see fig 55.

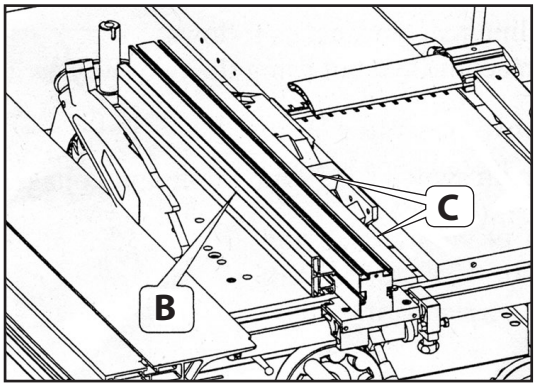
Fig 55



4) Regulate the cutting height by raising or lowering the rise and fall control hand wheel (A). Lock the blade in place by turning the Rise & fall control handle lock.



5) Adjust the rip-fence extension (B) to the desired position by loosening the two rip fence extension butterfly knobs (C) then tighten the knobs. Set the height of the guard to 3-4mm above the work piece and lock it in position. When done, lower the guard to board level.



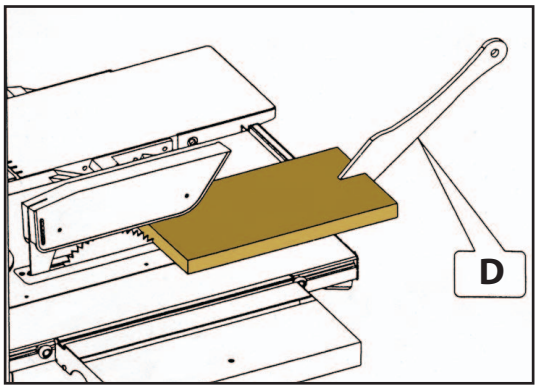
6) • Check that the room is well lit.

• Make sure that the saw table is clear of any tools.

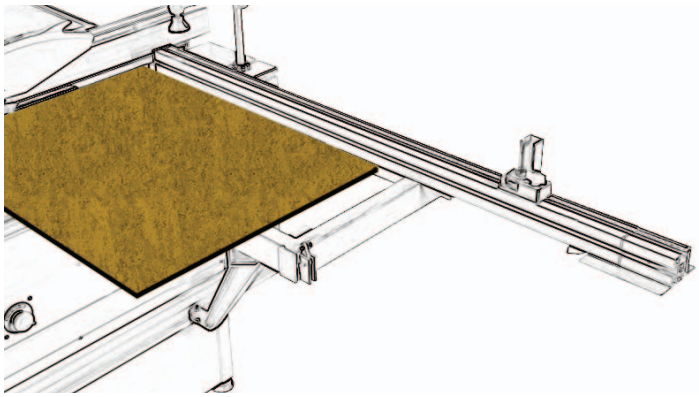
• Check that the saw guard is against the top of the board.

• Start the saw, wait until the saw is at full speed, use a push stick (D) to safely push the work piece through.

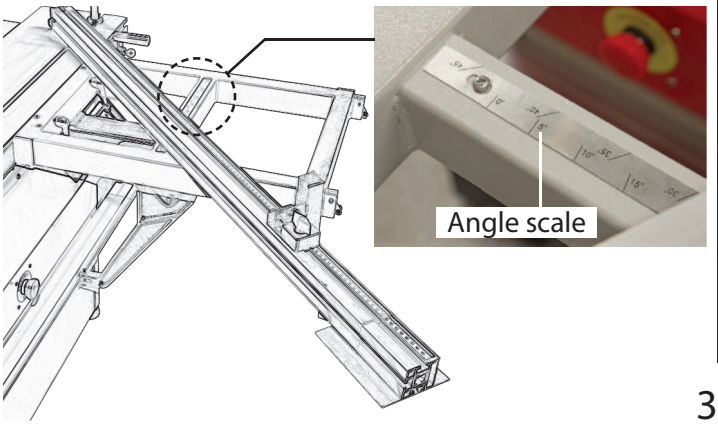
• Turn off the saw, wait until the saw comes to a complete stop before removing the board.



7) Use the extension table/fence when cutting large pieces of board at 90˚.



8) There is an angle scale mounted on top of the extension table, to set the fence at required angles for cutting parallel cuts.



Planer/Thicknesser Blades

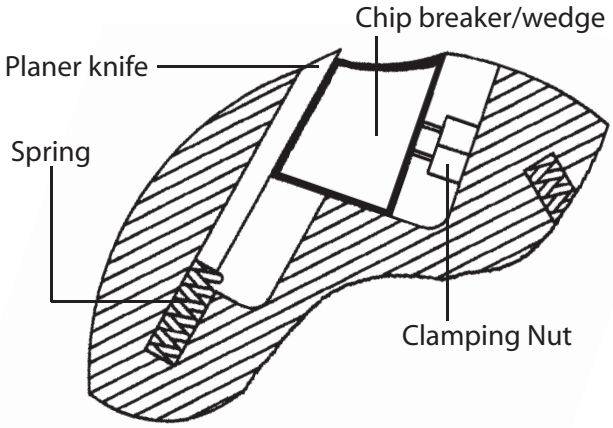
WARNING!! DISCONNECT THE MACHINE FROM THE MAINS BEFORE CONTINUING!

The planer blades are mounted into 3 slot housings machined in the cutter block. The slot housing comprises of a slot cut on a radial axis with a reverse tapered slot alongside it, see fig 56.

The depth of the first slot governs the seating of the chip breaker/wedge, the second slot allows the blade to be set to its correct depth in the block. The chip breaker/wedge is machined with a tapered face set at the same angle as the slot. This allows the blade to be clamped between parallel faces. The block will accept blades 250mm x 3mm x 30mm. After sharpening, the blades will reduce over their height dimension, but the blades can be safely used until their overall height dimension is 17mm, then the blades must be discarded as they can no longer be securely clamped in the housing.

The reverse taper slot has a series of blind holes bored in the bottom surface into which springs are fitted. These springs act against the bottom of the planer blade, to push it into contact with the setting tool, when the blades are being positioned after changing.

Fig 56



Changing the Blades

Locate the 5.5mm x 7mm A/F spanner in the tool kit. Turn the cutter block until one of the slots is uppermost, (between the tables). Using the spanner drive the 5 No. bolts into the chip breaker/wedge, thus removing the clamping effect. This should allow the blade to 'spring' up to protrude clear of the edge of the cutter block.

Carefully remove the blade, lay aside. Remove the chip breaker/wedge, lay aside, finally remove the springs

Continues Over....

from the slot and lay them aside. Repeat the process for the other two blades. If the block becomes difficult to hold located, being out of balance with the blade/s removed; use a thin wedge of material to jam the cutter block in position.

Now is a very good time to clean the slot housings thoroughly, remove the resin build-up, sawdust, chips and any old joiners/carpenters etc., that have recently disappeared without trace. Ensure the circumference of the cutter block is likewise cleaned thoroughly.

Remove the clamping bolts from the chip breaker/ wedges, clean the bolts and the threaded holes, clean the springs and the chip breaker/wedges thoroughly. Apply a little light oil to the springs. Remove the new/sharpened blades from their 'keeper' set carefully to hand and put the 'old' blades away in the 'keeper' to be sent for sharpening.

Locate the blade setting tool and put it to hand. Screw the bolts into the chip breaker/wedges. Select one of the slot housings and wedge the cutter block to maintain it in position. Set the springs into the holes in the bottom of the slot, introduce the chip breaker/wedge, position it against the 'back' of the slot, introduce a blade in front of it. Using the spanner start to unscrew the bolts, take care at this time as the blade could be protruding well above the block. Unscrew the bolts until the wedge just starts a 'nip' on the blade, then screw them back in half a turn.

At this point all the components should be loose in the slot (not slack), carefully position the blade and the wedge to line up with the edge of the cutter block. Press the blade setting tool gently down onto the blade, see fig 57 ensure that the locating feet are firmly in contact with the cutter block, and the blade is against the setting recess, see fig 58-59. Holding the blade and the setting tool in this position, tighten at least two of the clamping bolts to provide a firm clamp of the blade, with the setting tool held firmly in place. Tighten the remaining bolts. Tighten hard, but do not overtighten, remember, these are M4 bolts. Repeat this procedure for the remaining blades.

Fig 57

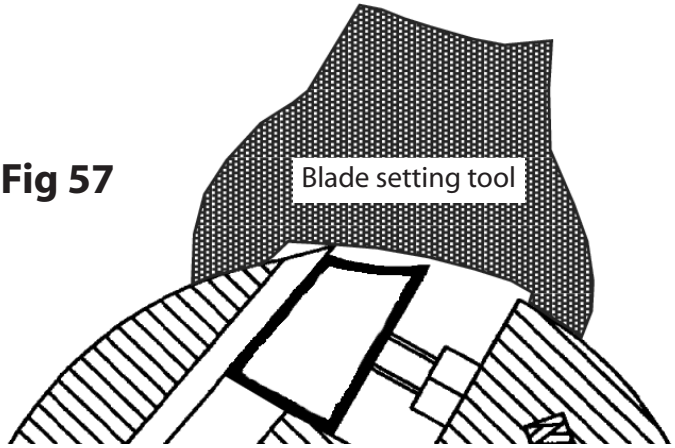
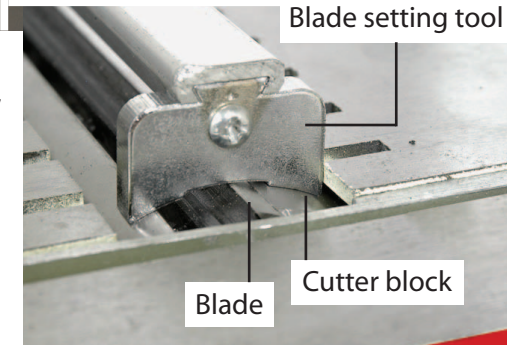


Fig 58-59



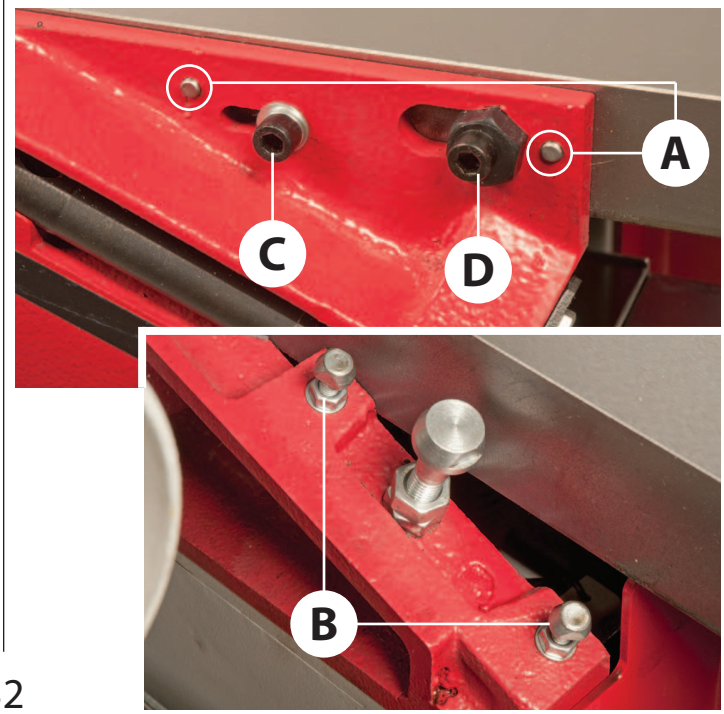
When all the blades are fitted, rotating the cutter block by hand in reverse and visually inspecting the edge of the blades against a fixed point. If this appears satisfactory, carry out a final 'tightness' check on the clamping bolts; remove all the tools and stow away.

NOTE: If at any point you need to adjust the tables so they are parallel, adjust by the following method:

1) Remove the transport pins (A) using a pin punch and hammer.
2) Adjust the table height locating bolts (B).
3) Loosen the Hex bolt (C) and eccentric cam (D), place a straight edge across both tables and adjust until the tables are in line. When you are satisfied tighten (C and D), see fig 60. Reset the feed scale to '0', see page 23.

NOTE: BY RESETTING THE TABLES THE HOLES FOR THE TRANSPORT PINS MAY BE OUT OF ALIGNMENT. WE SUGGEST RE-DRILLING NEW HOLES NEAR ORIGINALS THEN REPLACING THE PINS.

Fig 60



Changing the Panel Saw Blade

WARNING!! DISCONNECT THE MACHINE FROM THE MAINS BEFORE CONTINUING!

Raise the saw blade to it's highest point. Remove the saw blade guard. Pull the sliding table locking knob towards you and slide the table to the side to expose the blades. Using the spanner and the tommy bar (A) provided, put the spanner onto the flats on the nut. Turn the saw until the tommy bar hole (B) is visible. Insert the tommy bar and turn the saw to allow it to rest against the front edge of the saw slot, see figs 61-62.

Fig 61

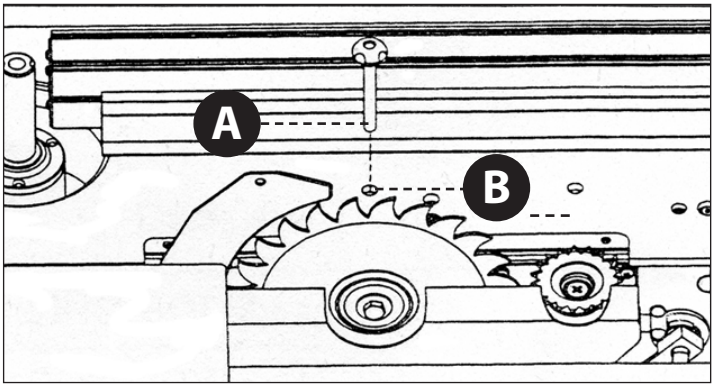
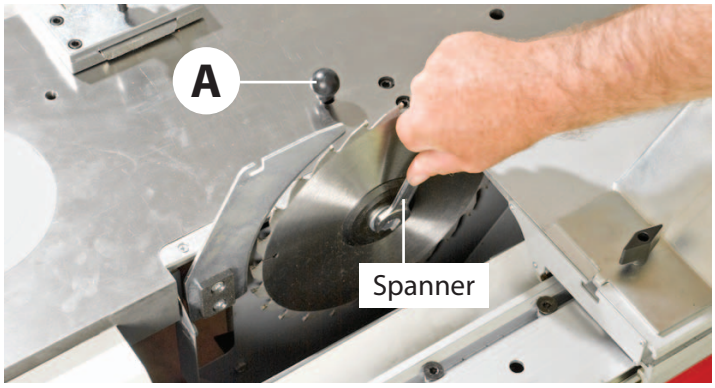


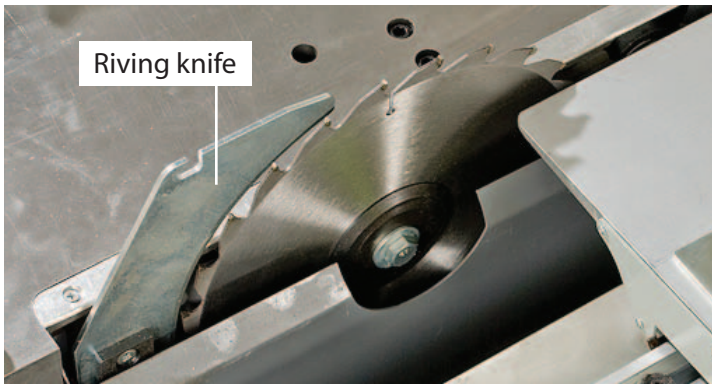
Fig 62



Slacken off the saw nut (remember left hand thread). Remove the saw nut, then remove the sawplate washer and the saw blade. Now is a good time to give the interior of the machine, the dust extraction channels, etc. a thorough clean. Check the new blade for damage, missing teeth,sharpness etc. Fit the new blade, ensure that the teeth are pointing towards the front of the machine. Put the saw plate washer onto the shaft and twist on the saw nut. Spin the nut up finger tight and check the saw is correctly seated.

Tighten up the saw nut, using the tommy bar to hold the shaft steady. Check the riving knife is aligned with the saw blade, and correctly positioned, see fig 63.

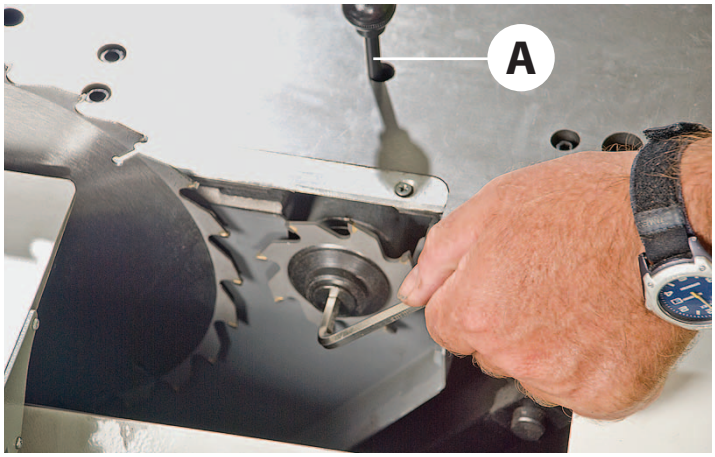
Fig 63



Changing the Scoring Blade

Using the 8mm Hex key and the tommy bar (A) insert the Hex key into cap head bolt, turn the scoring saw until the tommy bar hole is visible. Insert the tommy bar and turn the saw to allow it to rest against the front edge of the saw slot. Remove the blade check the new blade for damage, missing teeth,sharpness etc. then replace the scoring saw and tighten, see fig 64.

Fig 64



Slide the table back until the locking knob pin engages the pin recess, replace the saw blade guard. When everything is satisfactory, turn the saw blade once by hand to check it doesn't foul anywhere. Reconnect the machine to the mains supply.

Give the machine a 'quick' burst check (i.e. quick ON-OFF) to ensure everything is O.K. If everything is satisfactory, continue to use the machine. Check the old blade for sharpness, missing teeth, resin buildup, etc., clean if necessary and send for refurbishment/re sharpening if required. If the blade is not to be resharpened, clean and pack away in its stowage case.

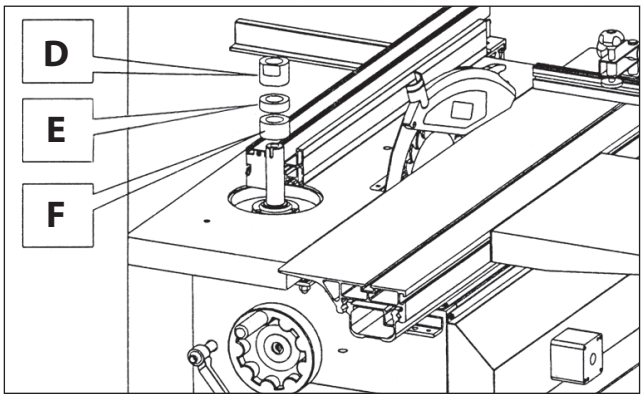
Continues Over....

Changing the Spindle Moulder Cutter

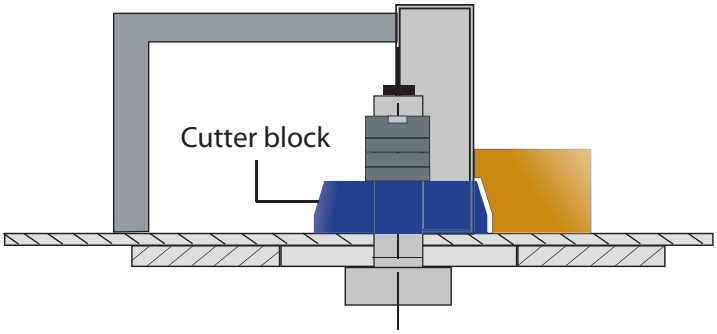
WARNING!! DISCONNECT THE MACHINE FROM THE MAINS BEFORE CONTINUING!

Raise the spindle to the maximum height by unlocking the spindle moulder rise/fall locking handle and turning the spindle moulder rise/fall handle clockwise then lock in place. Using the 12mm hex key provided remove the cap head clamping block (D), spacing collar/s (E) and clamping washer (F) and place them safely aside, remove the cutter block, see fig 65.

Fig 65



Check the new cutter block for damage,sharpness etc. Fit the new cutter block on the arbor as low as possible, see diagram below. Watch the direction of rotation counter-clockwise when mounting the cutter. replace the clamping washer (F), spacing collar/s (E) and clampling block (D). Tighten the clamping block securely.



Turn the cutter block round once by hand to check it doesn't foul anywhere. Reconnect the machine to the mains supply. Give the machine a 'quick' burst check (i.e. quick ON-OFF) to ensure everything is fine.

If everything is satisfactory, continue to use the machine. Check the old cutter block for damage, sharpness, resin buildup, etc., clean if necessary and send for refurbishment/re-sharpening if required. If the cutter block is not to be re-sharpened, clean and pack away in its stowage case.

WARNING!! DISCONNECT THE MACHINE FROM THE MAINS BEFORE CONTINUING!

Changing the Spindle Moulder Speed

Open the spindle moulder access door to the side of the machine, see fig 66. Lower the spindle to it's lowest point, if not done so already. Locate the 16mm socket spanner (B), loosen the two bolts (A) on top of the motor, push the motor to the side, to allow the belt to go slack, reposition the belt on the pulleys as required. When your are happy push the motor back and tighten the clamping bolts (A) to keep the tention, see figs 67-68.

Fig 66-67

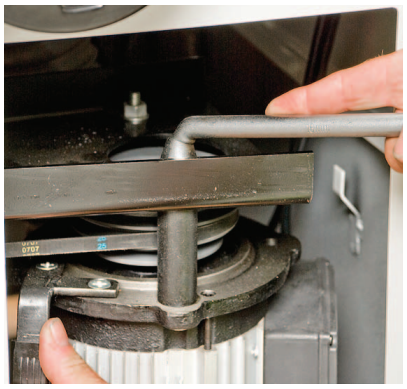
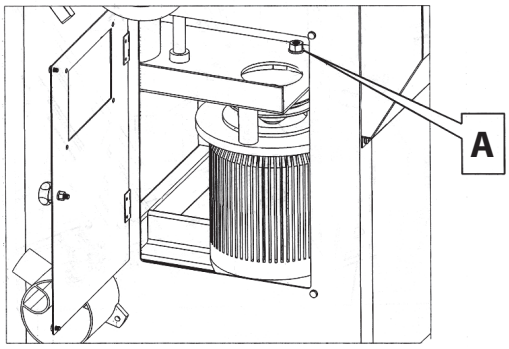
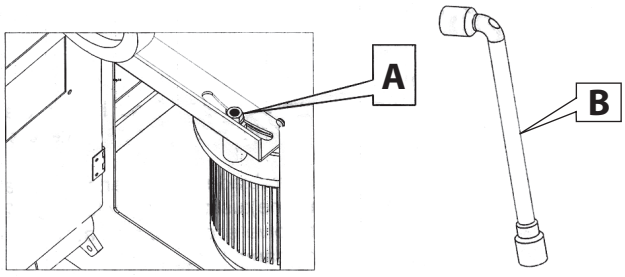
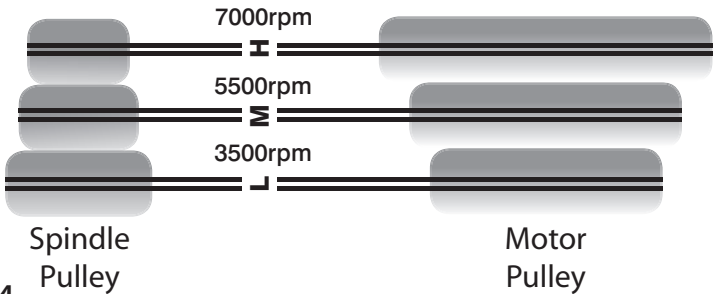


Fig 68







Close the access door, raise the spindle, reconnect the machine to the mains supply. Give the machine a 'quick' burst check (i.e. quick ON-OFF) to ensure everything is O.K. If everything is satisfactory, continue to use the machine.

WARNING!! DISCONNECT THE MACHINE FROM THE MAINS BEFORE CONTINUING!

Your combination machine requires minimum maintenance, but it is essential that it is carried out to ensure the longevity and correct function of the machine.

Planer/ Thicknesser

- Check the overhand tables and the thicknessing bed are clean, not coated with resin etc. Apply a proprietary cleaner/lubricating agent.
- Check the cable and the plug for damage or defects.
- Mount the planer fence and check it is set upright.
- Check the dust extraction hood and ensure there is no excessive build up of sawdust/resin, especially in the mouth of the chip deflector and around the mouth of the extractor.
- Check the blades for sharpness and damage.
- Clean the machine thoroughly, remove any shavings, sawdust, chips etc, from in, under and around the machine.
- Check the cutter block for resin build up, especially behind the blade and in the scallop of the chip breaker/ wedge.
- Raise the tables and brush out and clean any debris or build up around the area of the noise attenuating slots in the edges of the overhand tables.
- Check the in feed and take off pressure rollers are not clogged, clean as necessary.
- Check the action of the anti-kickback fingers, again clean and lubricate as required.
- If the "Planer/Thicknesser" is not going to be used for a period of time spray a light coat of oil over the table surface that will help prevent rust.
- Re-tighten the table lock. If the table lock downs becomes 'slack' they can be adjusted by altering the height of the table lock stud. Hold the stud firmly and loosen the lock nut, adjust the stud, lightly 'pinch' with the lock nut. If correct, fully tighten the lock nut, if not, repeat the process until the 'lock down' is correct.

Panel Saw

- Keep the saw as clean and free from saw dust build up as practical.
- Periodically, unlock the sliding table and push to one side to gain access to the saw mechanism. Raise the saw blade to it's highest point. Remove the saw blade guard, lower the blade cover and blow out or brush out the saw inner workings, using a proprietary resin cleaner.

Note: You may require an air line to blow out areas physically not possible to reach, i.e the threaded drive shafts of the rise and tilt mechanisms.

- Check the saw and scoring saw blade/s regularly for chipped, missing, damaged teeth etc. and remove any resin build up from the blade/s, riving knife etc.
- If the "Panel Saw" is not going to be used for a period of time, spray a light coat of oil over the table surface and blades that will help prevent rust.

Spindle Moulder

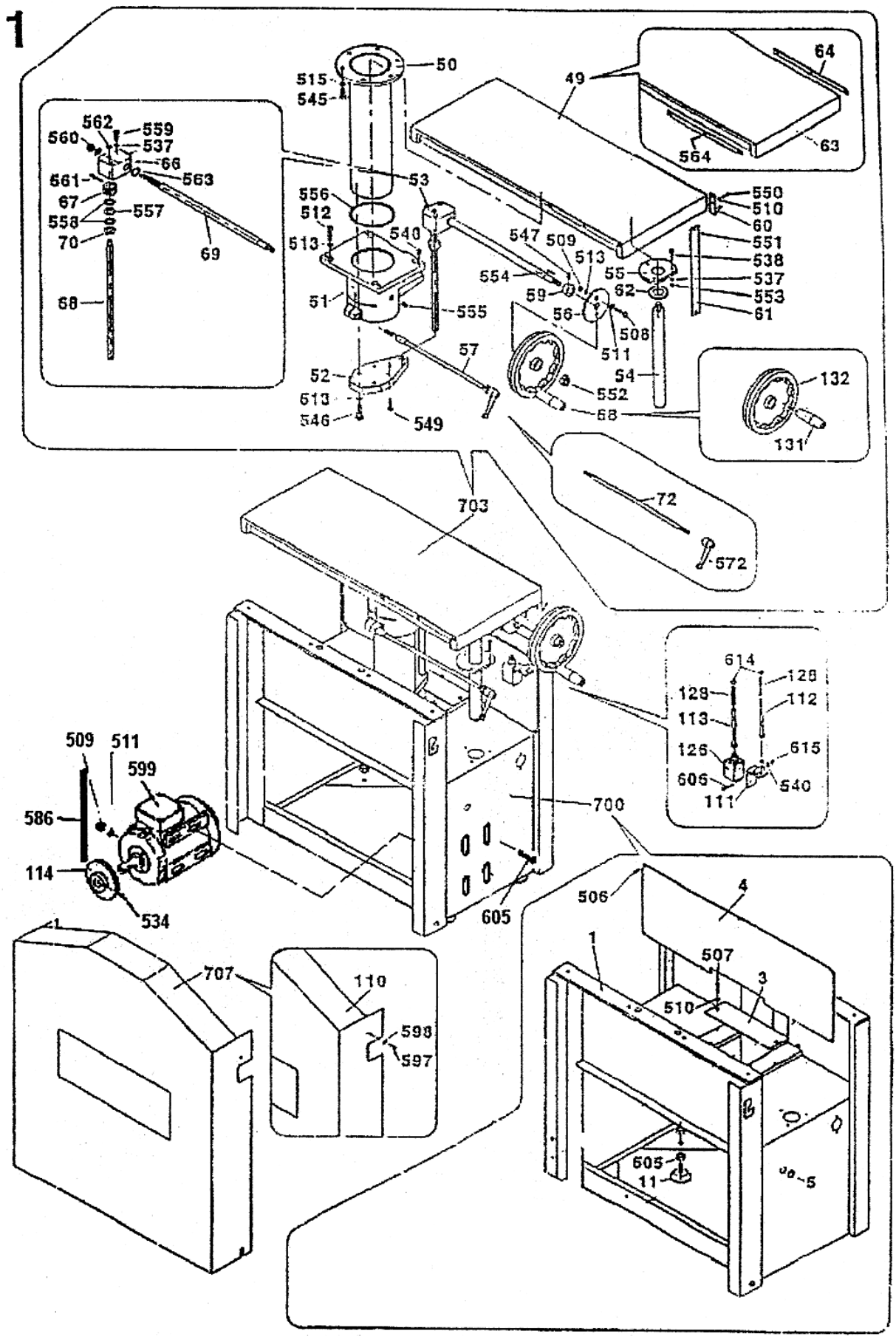
- Keep the cutter block clean and free from dust build up.
- Check the cutter block regularly for chipped blades and damage to block i.e cracks in the cutter block.
- When changing the cutter block, remove the cutter block and place safely away, clean the spindle by spraying a light coating of oil over the shaft and install a new cutter block.
- Opening the access door for the spindle moulder, check the belt tension. If the belt is loose, using the 16mm socket spanner loosen the motor bolts and push/pull until the belt is under tension again, tighten the motor bolts to keep the tension.

After several months of constant use the condition of the chains, sprockets,tension of the drive belts and the threaded drive shafts of the rise and fall tilt mechanisms will need to be checked, that may require a service engineer to oversee the job.

If you find that the machine is not performing as it should please contact our "Technical Sales Team" by phone on 03332 406406.

Parts Breakdown/List

Planer Thicknessser Assembly



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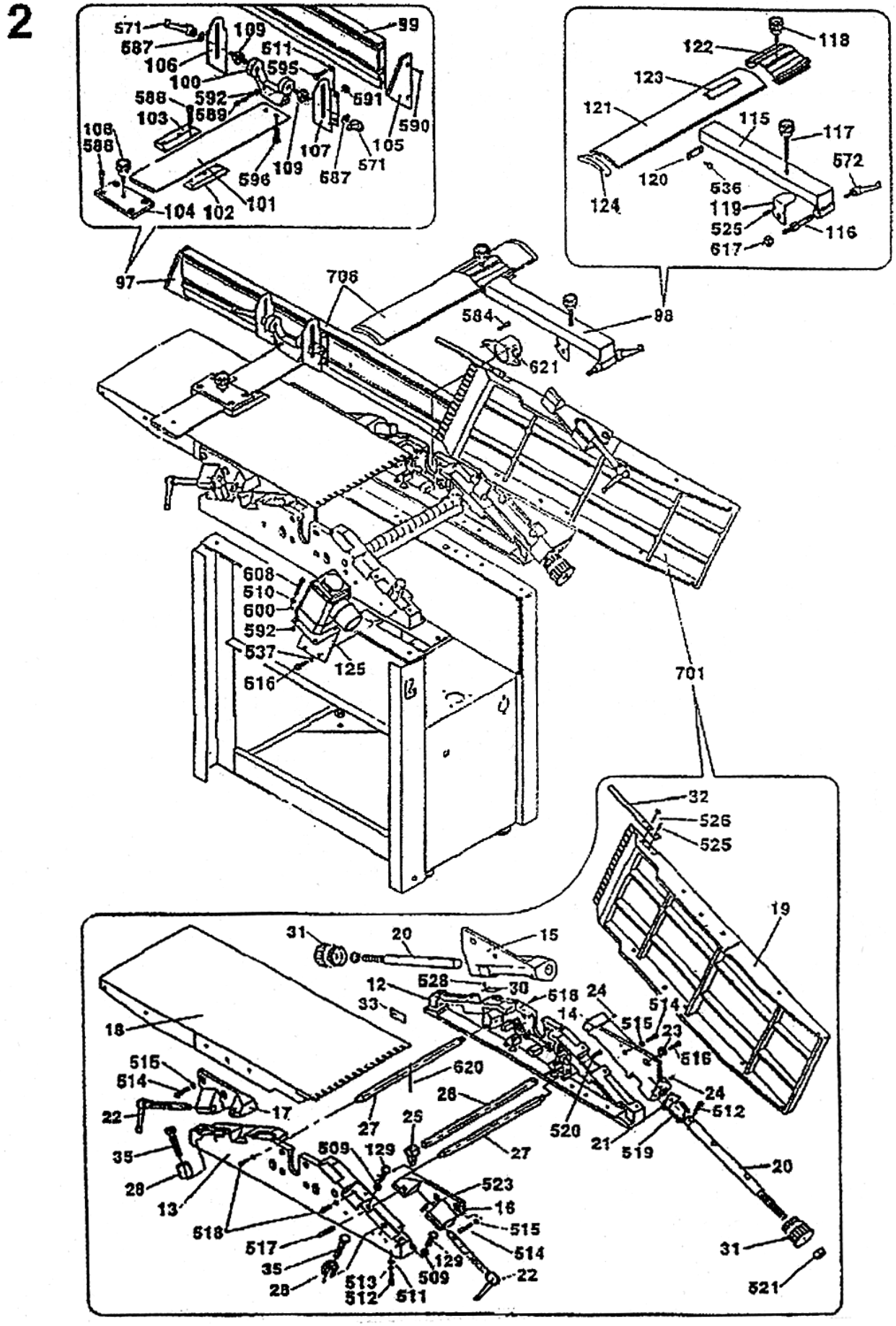
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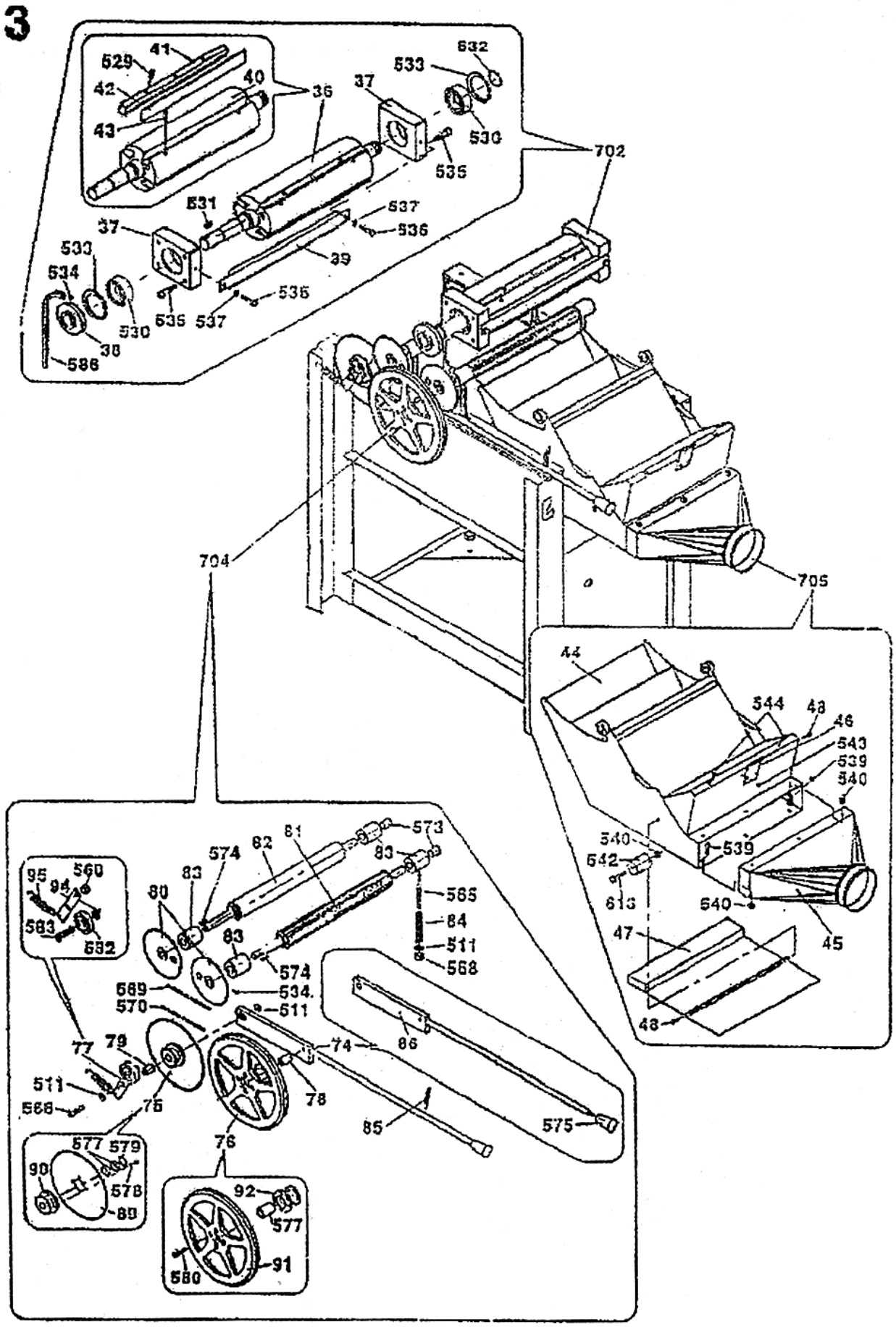
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Planer Thicknessser Assembly

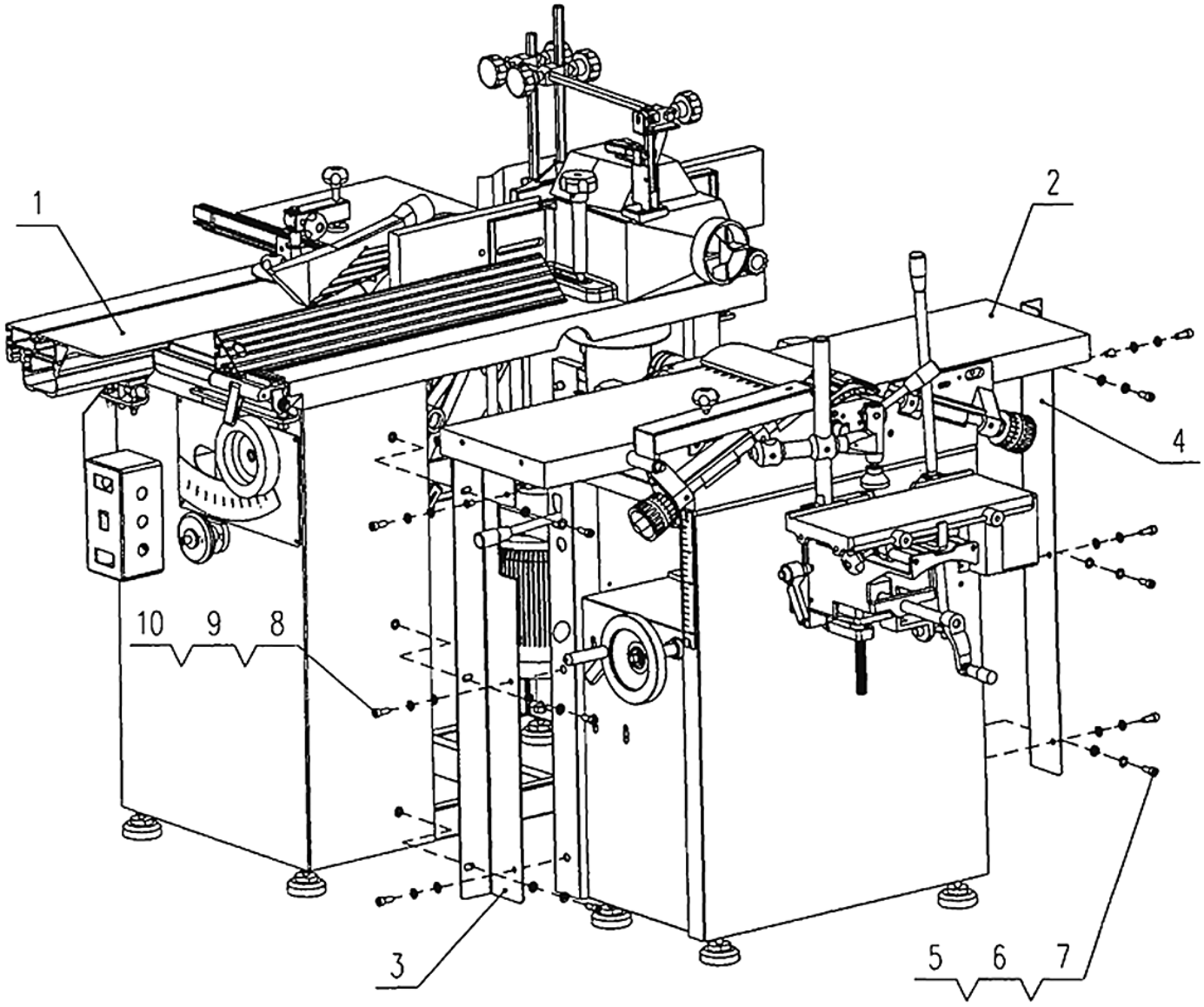
NO	DESCRIPTION	Q'TY
1	Right and left Support plate	1
3	Plate	2
4	Right plate	1
5	Bearing tube	1
11	Support base	4
12	Right cutter block support	1
13	Left cutter block support	1
14	Right adjusting wing	1
15	Left adjusting wing	1
16	Right Locking block	1
17	Left Locking block	1
18	Out feed table	1
19	In feed table	1
20	Adjusting axle	2
21	Metal plate	2
22	Locking handle assembly	2
23	Eccentric bush	2
24	Screw M8x8	2
25	Kick block	20
26	Axis	1
27	Support axle	2
28	Hex nut M10	4
30	Scale	1
31	Adjusting wheel	2
32	Locating plate	1
33	Scale	1
35	Hex bolt M10x60	2
36	Cutter block assembly	1
37	Bail bearing bush	2
38	Cutter block pulley	1
39	Protective plate	1
40	Cutter block	1
41	Blade locking block	3
42	Blade 250x30x3	3
43	Spring	6
44	Dust chute	1
45	Dust chute head	1
46	Locking plate	1
47	Change-over plate	1
48	Screw M5x6	2
49	Thicknessing table assembly	1
50	Lifting tube	1
51	Lifting tube bracket	1
52	Support base	1
53	Gear assembly	1
54	Adjusting bar	1
55	Block	1
56	Block	1
57	Locking bar assembly	1
58	Hand wheel	1
59	"C" ring	1
60	Pointer	1
61	Depth scale	1
62	Washer	1
63	Thicknessing table	1
64	Plate	4
66	Gear box	1
67	Gear	1
68	Guide screw	1
69	Gear axle	1
70	Bush	1
72	Locking handle	1
74	Control handle assembly	1
75	Sprocket assembly	1
76	Sprocket assembly	1
77	Tension system assembly	1
78	Pin	1
79	Long pin	1
80	Sprocket IV	2
81	Driving roller	1
82	Pressing roller	1
83	Bush	4
84	Double-head bolt	4
85	Spring	1
86	Connecting plate	1
89	Sprocket I	1
90	Sprocket II	1
91	Iron friction wheel	1
92	Sprocket III	1
94	Tension plate	1
95	Spring	1
97	Guiding fence	1
98	Cutter block protective fence	1
99	Fence plate	1
100	Supporting plate	1
101	Guiding block	1
102	Right metal plate	1
103	Left metal plate	1
104	Connecting plate	1
105	Protective plate	1
106	Left sliding block	1
107	Right sliding block	1
108	Handle	1
109	Double head bolt	1
110	Protective cover	1
111	Sensitive switch plate	1
112	Short locating bar	1
113	Long locating bar	1
114	Motor pulley	1
115	U-shaped metal tube	1
116	Locking handle	1
117	Long locking handle	1
118	Short locking handle	1
119	Angle iron	1
120	Support plate	1
121	Protective plate	1
122	U-shaped bracket	1
123	Locking plate	1
124	Plastic insert	2
125	Switch mounting plate	1
126	White sensitive switch	1
128	Spring	3
129	Hex bolt M6x20	2
131	Handle wheel bar	1

Continues Over....

Parts Breakdown/List

132	Hand wheel	1
505	Nut M10	8
506	Screw M5x8	5
507	Screw M5x8	4
508	Hex bolt M8x16	2
509	Hex nut M8	8
510	Washer Φ 5	12
511	Washer Φ 8	22
512	Socket cap screw M8x25	4
513	Spring washer Φ 8	18
514	Socket cap screw M8x25	4
515	Spring washer Φ 8	4
516	Socket cap screw M8x30	2
517	Pin A8x30	2
518	Socket cap screw M8x30	4
519	Hex bolt M6x10	2
520	Screw M6X20	1
521	Hex nut M16	4
523	"C'ring Φ 12	2
525	Pin 5x16	1
526	Socket cap screw M5x12	1
528	Screw M4x6	2
529	Bolt M6X10	15
531	Pin 6X20	1
532	"C'ring Φ 25	1
534	Screw M6X10	4
535	Socket cap screw M6x8	8
536	Hex bolt M6x10	2
537	Spring washer Φ 5	12
538	Screw M6x25	3
539	Hex bolt M6x10	14
540	Hex nut M6	22
542	Support cylinder	1
542	Support cylinder	1
544	Anti-vibration washer	2
545	Socket cap screw M8x16	10
546	Socket cap screw M8x30	7
547	Screw M8x8	1
548	Screw M6x10	4
549	Socket cap screw M6x35	1
550	Screw M4x6	2
551	Screw M4x6	2
552	Hex nut M12	1
553	Nut M6	4
554	Pin 5X12	1
555	Lubricating injection hole M10	1
556	Seal	1
557	Ball bearing 51102	1
558	Spring washer 10	2
559	Hex bolt M6x65	2
560	Hex nut M10	2
561	Pin 4x25	1
562	"C" ring Φ 10	1
563	"Cring Φ 18	1
564	Screw M4x6	12
565	Spring	4
566	Hex bolt M6x10	1
568	Nut M3	4
569	Chain 05B-1x86	1
570	Chain 05B-1x76	1
571	Locking bar	2
572	Long handle assembly	1
573	Axle bush	8
574	Pin 5X16	2
575	Handle	1
577	Bait bearing 61901-2Z	4
578	Screw M6x10	4
579	"Cring Φ 24	4
580	Screw M6x14	4
582	Bail bearing 6303-2Z	1
583	Pin	1
586	Z-belt(L=1092)	1
587	Washer Φ 10	6
588	Socket cap screw M6x12	6
589	Hex bolt WI5x50	1
590	Screw ST5x40	4
591	Nut MS	4
592	Nut MS	7
595	Hex bolt M8x16	4
596	Socket cap screw M6x12	2
597	Screw M5x8	6
598	Spring washer Φ 5	6
599	Motor	1
600	Electromagnetic switch	1
605	Hex bolt M8x25	4
606	Socket cap screw M6x40	1
608	Screw M5x50	2
613	Socket cap screw M6x16	2
614	C- ring Φ 6	2
615	Hex nut M6	1
616	Socket cap screw M5X12	2
617	Nut M12	1
619	Long handle assembly	1
621	Protective cover	1
700	Base assembly	1
701	Planing table assembly	1
702	Cutter block assembly	1
703	Thicknessing table assembly	1
704	Sprocket system assembly	1
705	Extraction system assembly	1
706	Fence assembly	1
707	Protective cover assembly	1

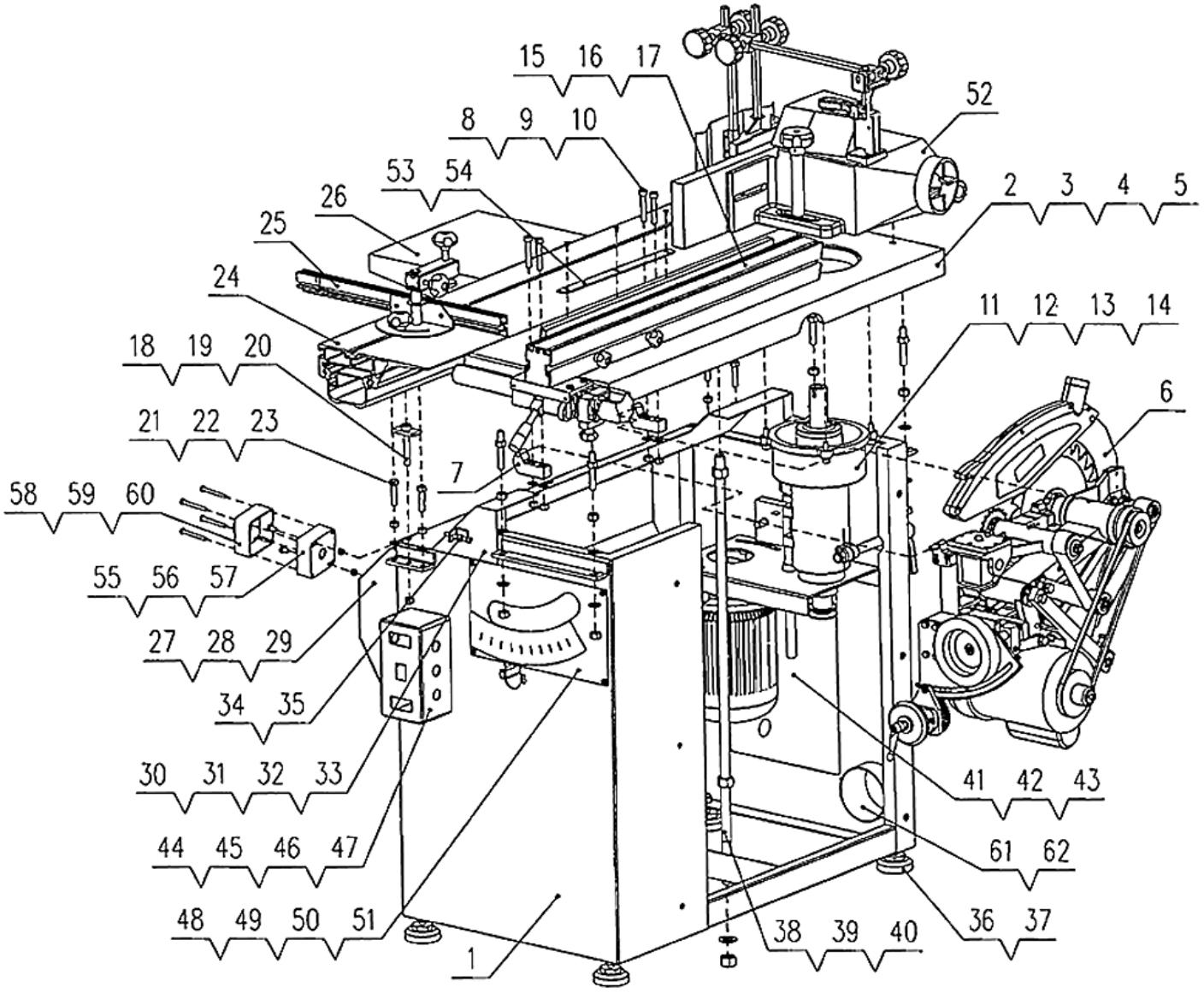
Panel Saw/ Planer Thicknesser Assembly



NO	DESCRIPTION	Q'TY
01	SAW BENCH AND MILLING BODY	1
02	PLANER THICKNESSER BODY	1
03	FRONT CONNECTED PLATE	1
04	BACK CONNECTED PLATE	1
05	CAP SCREW M8X20	6
06	SPRING WASHER 8	6
07	FLAT WASHER 8	6
08	CAP SCREW M8X20	6
09	SPRING WASHER 8	6
10	FLAT WASHER 8	6

Parts Breakdown/List

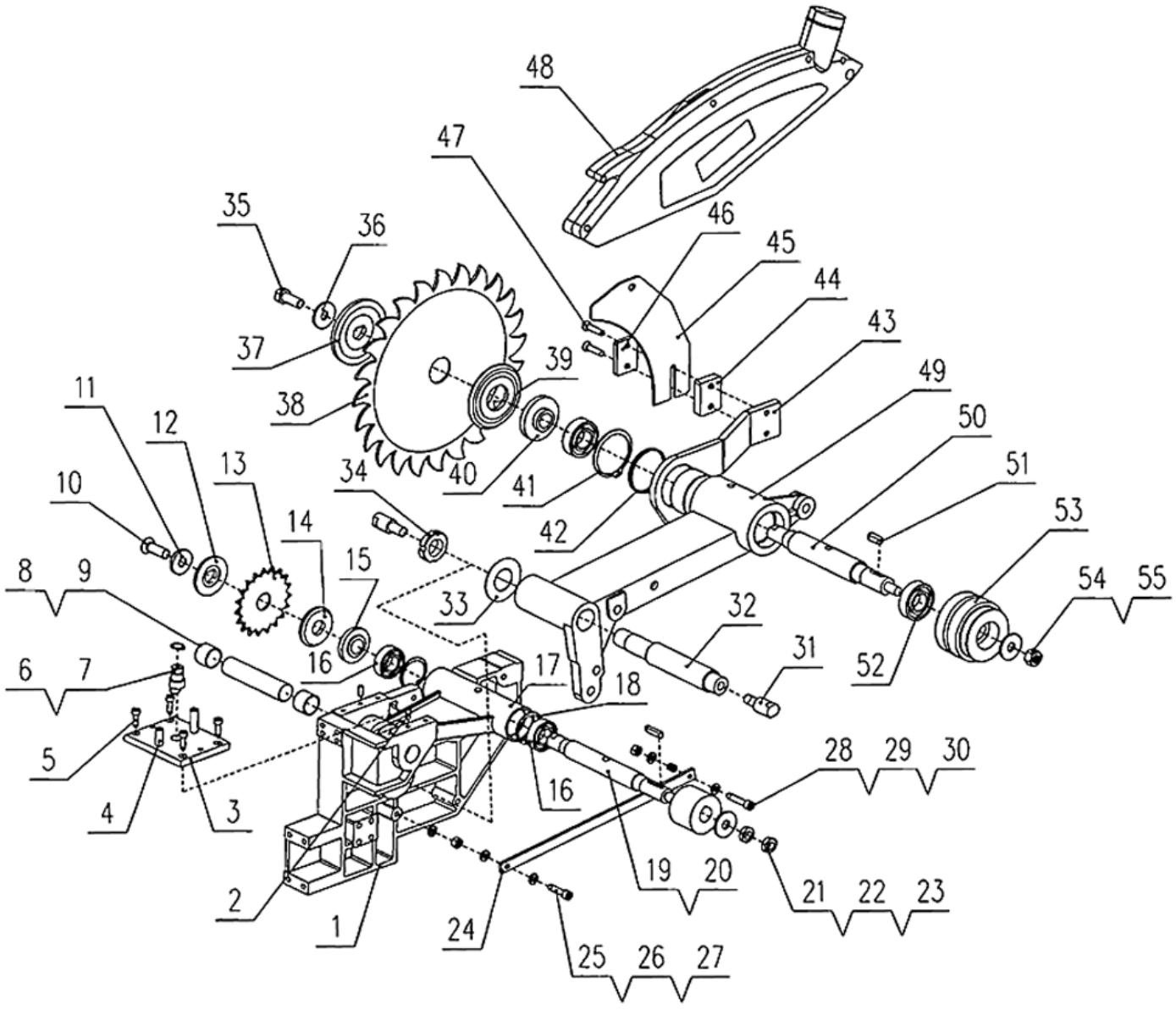
Panel Saw/ Spindle Moulder Assembly



NO	DESCRIPTION	Q'TY
01	Saw bench and moulder body	1
02	Saw bench and moulder table	1
03	Phillips screw M10X70	4
04	Hex nut MIO	12
05	Flat washer MO	8
06	Double saw blade assembly	1
07	Locking block	2
08	Cap screw M8x50	4
09	Hex locking nut M8	4
10	Flat washer 8	4
11	Moulder assembly	1
12	Cap screw M8x30	4
13	Flat washer 8	4
14	Spring washer 8	4
15	Fence for saw bench assembly	1
16	Locking handle assembly	2
17	Flat washer 6	2
18	Plate	2
19	Cap screw M10x65	2
20	Hex nut MIO	2
21	Bolt M8X55	4
22	Hex nut M8	4
23	Flat washer 8	4
24	Sliding table assembly	1
25	Mitre gauge and alum, guide	1
26	Extension table	1
27	Side protective cover	1
28	Cap screw M5x8	6
29	Flat washer 5	6
30	Upper protective cover	1
31	Cap screw M5x8	3
32	Cap screw M5x10	2
33	Flat washer 5	5
34	Cap screw M6x45	2
35	Hex nut M6	2
36	Steel foot	4
37	Hex nut MIO	4
38	Support pole	1
39	Hex nut M16	3
40	Flat washer 16	1
41	Side cover	1
42	Cap screw M5x8	4
43	Flat washer 5	4
44	Main control switch	1
45	Switch guide label	1
46	Cap screw M5x12	4
47	Cap bolt ST4X25	4
48	Scale cover	1
49	Tilting scale	1
50	Cap screw M5x6	4
51	Flat screw 5	4
52	Milling blade protective cover	1
53	Saw blade cover	1
54	Cap screw M4X8	3
55	Emergency switch box	1
56	Cap screw M5x12	2
57	Flat washer 5	2
58	Emergency switch cover	1
59	Cap screw M4x35	4
60	Label for emergency switch	1
61	Dust outlet	1
62	Cap screw M6x16	3

Parts Breakdown/List

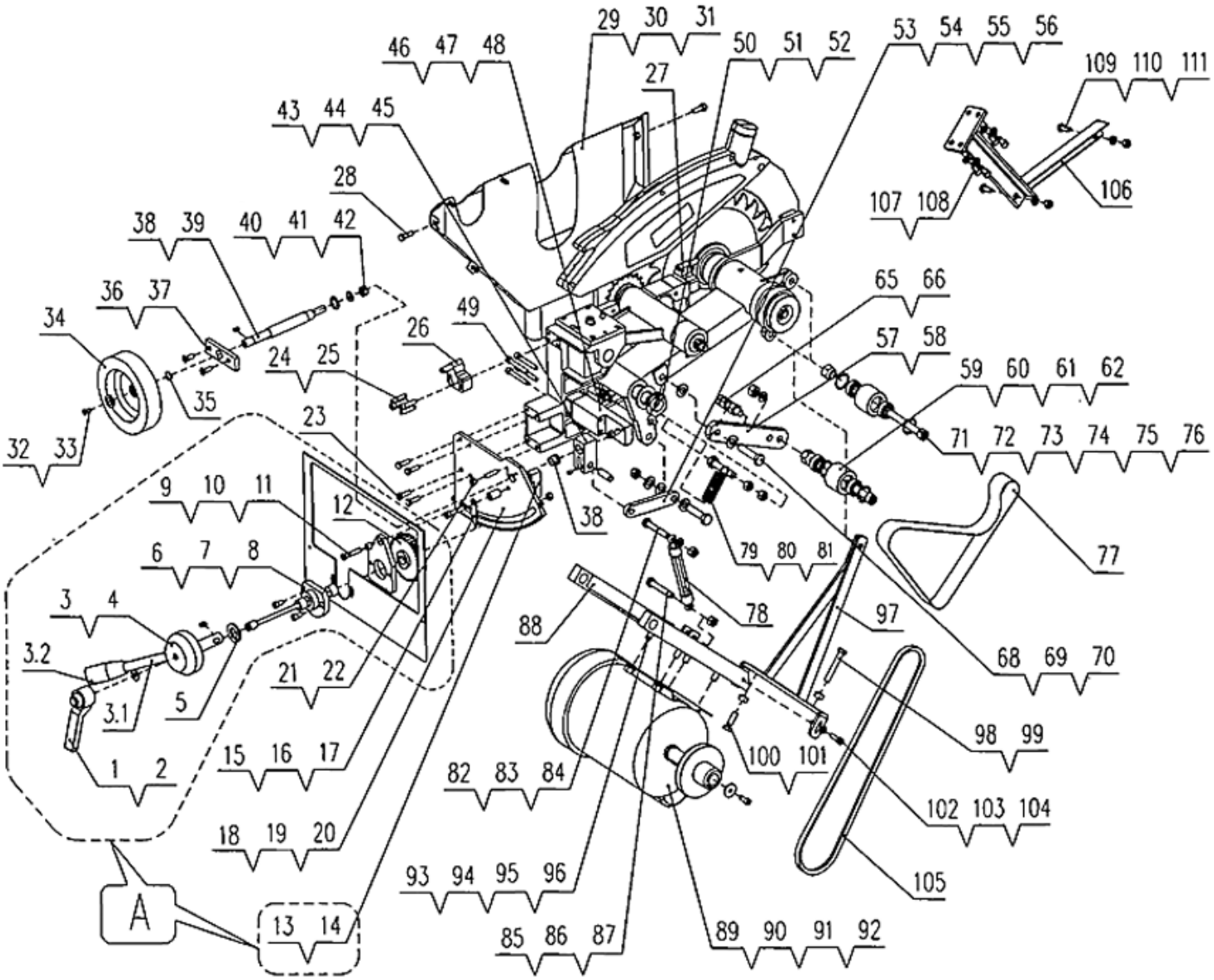
Panel Saw Assembly 1



NO	DESCRIPTION	Q'TY
01	Small blade stand	1
02	Phillips screw M6X10	2
03	Adjusting plate	1
04	Phillips screw M8X30	2
05	Cap screw M5x10	4
06	Adjusting axle	1
07	"C" ring 12	1
08	Little axle	1
09	Sleeve	2
10	Cap screw M10X30	1
11	Washer	1
12	Little outer plate	1
13	Small blade 80x Φ20x3.2x2.2x8T	1
14	Little inner plate	1
15	Small location sleeve	1
16	Bearing 6003-2Z/Z2	2
17	Small staff	1
18	"C" ring 35	2
19	Small spindle	1
20	Key A5X20	1
21	Small vice-pulley	1
22	Flat washer 10	1
23	Left thin nut M10	2
24	Connected pole	1
25	Cap screw M6x20	1
26	Nut M6	1
27	Flat washer 6	3
28	Cap screw M6x30	1
29	Hex nut M6	2
30	Flat washer 6	3
31	Pin	2
32	Big axle	1
33	Adjusting washer	1
34	Round Nut M20x1.5	1
35	Hex bolt M10x25 (left)	1
36	Washer 10	1
37	Big outer plate	1
38	Blade Φ250xΦ30x3.2x24T	1
39	Big inner plate	1
40	Big location sleeve	1
41	"C" ring 50	1
42	Washer	1
43	Blade arm	1
44	Support plate	1
45	Riving knife	1
46	Fixed plate	1
47	Cap screw M6X25	2
48	Protective guard	1
49	Big staff	1
50	Big spindle	1
51	Key A6X20	1
52	Bearing 6004-227Z2	2
53	Big vice pulley	1
54	Hex locking nut M10	1
55	Washer 10	1

Parts Breakdown/List

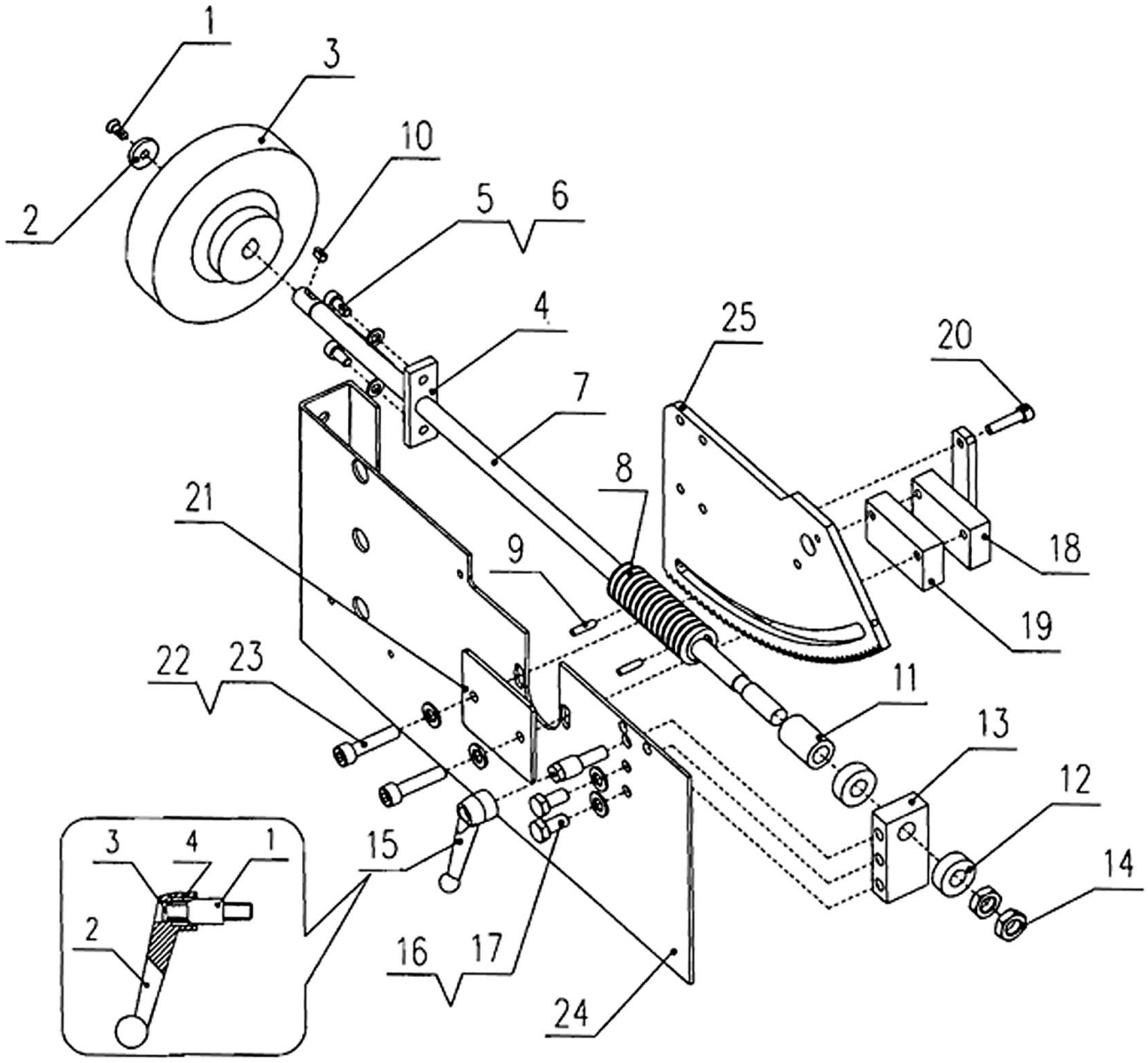
Panel Saw Assembly 2



NO	DESCRIPTION	QTY
01	Lock handle	1
02	Washer 8	1
03	Turning handle	1
04	Key A5X10	1
05	Flat washer 16	1
06	Connected plate	1
07	Inner sleeve 1	2
08	Cap screw M6x12	2
09	Clamp plate	1
10	Inner sleeve 2	1
11	Cap screw M6x35	1
12	Gear	1
13	Rack	1
14	Hex locking nut M8	1
15	Pointer	1
16	Pointer sleeve	1
17	Cap screw M6x30	1
18	Rack plate	1
19	Cap screw M4x20	2
20	Hex nut M4	2
21	Phillips screw M6X25	1
22	Hex nut M6	1
23	Hex bolt M6x20	4
24	Cap screw M6x25	4
25	Pin A6X25	4
26	Front turning block	1
27	Back turning block	1
28	Hex bolt M6x12	2
29	Dust collecting cover	1
30	Cap screw M6x10	3
31	Flat washer 6	3
32	Cap screw M5x12	1
33	Hand wheel washer	1
34	Hand wheel Φ12xΦ160	1
35	"C" ring 9	1
36	Small adjusting plate	1
37	Cap screw M5x12	2
38	Lifting pole	1
39	Key A4X12	1
40	Hex locking nut M8	1
41	Flat washer 12	1
42	Flat washer 8	1
43	Exchange block	1
44	Pin A10X30	1
45	Phillips screw M5X8	1
46	Rack stand	1
47	Phillips SCREW M6X25	1
48	Hex nut M6	1
49	Cap screw M6x45	4
50	Location nut	1
51	Phillips screw M6X10	1
52	Flat washer 20	1
53	Lifting staff	1
54	Hex bolt M10x40	1
55	Flat washer 10	3
56	Hex nut MIO	1
57	Shifter bar	1
58	Inner location sleeve	1
59	Cap screw M10x60	1
60	"C" ring 26	2
61	Bearing 6000-227Z2	2
62	Adjusting pulley	1
63	Flat washer 10	1
64	Hex nut MIO	1
65	Hex bolt M10x40	1
66	Hex nut MIO	2
68	Hex bolt M10x40	1
69	Hex nut MIO	1
70	Flat washer 10	2
71	Cap screw M10x80	1
72	"C" ring 26	2
73	Bearing 6000-2Z/Z2	2
74	Adjusting pulley	1
75	Inner location sleeve	1
76	Hex locking nut M10	1
77	Combined belt 1.5x25x750	1
78	Flower bolt M8X(at least)130	1
79	Adjusting spring	1
80	Hex bolt M10x40	1
81	Hex nut MIO	2
82	Hex bolt M8x50	1
83	Flat washer 8	1
84	Hex nut M8	1
85	Hex bolt M8x30	1
86	Flat washer 8	2
87	Hex nut M8	1
88	Motor plate	1
89	Motor	1
90	Pulley 1	1
91	Cap screw M6x16	1
92	Special washer 6	1
93	Hex bolt M8x20	4
94	Flat washer 8	4
95	Spring washer 8	4
96	Hex nut M8	4
97	Adjusting stand	1
98	Hex bolt M8x50	1
99	Hex nut M8	1
100	Hex bolt M8x25	1
101	Hex nut M8	1
102	Cap screw M6x20	2
103	Flat washer 6	2
104	Hex locking nut M6	2
105	Z-Vbelt (L=840)	1
106	Angle steel assembly	1
107	Cap screw M6x12	4
108	Flat washer 6	4
109	Hex bolt M6x16	2
110	Hex locking nut M6	2
111	Flat washer 6	2

Parts Breakdown/List

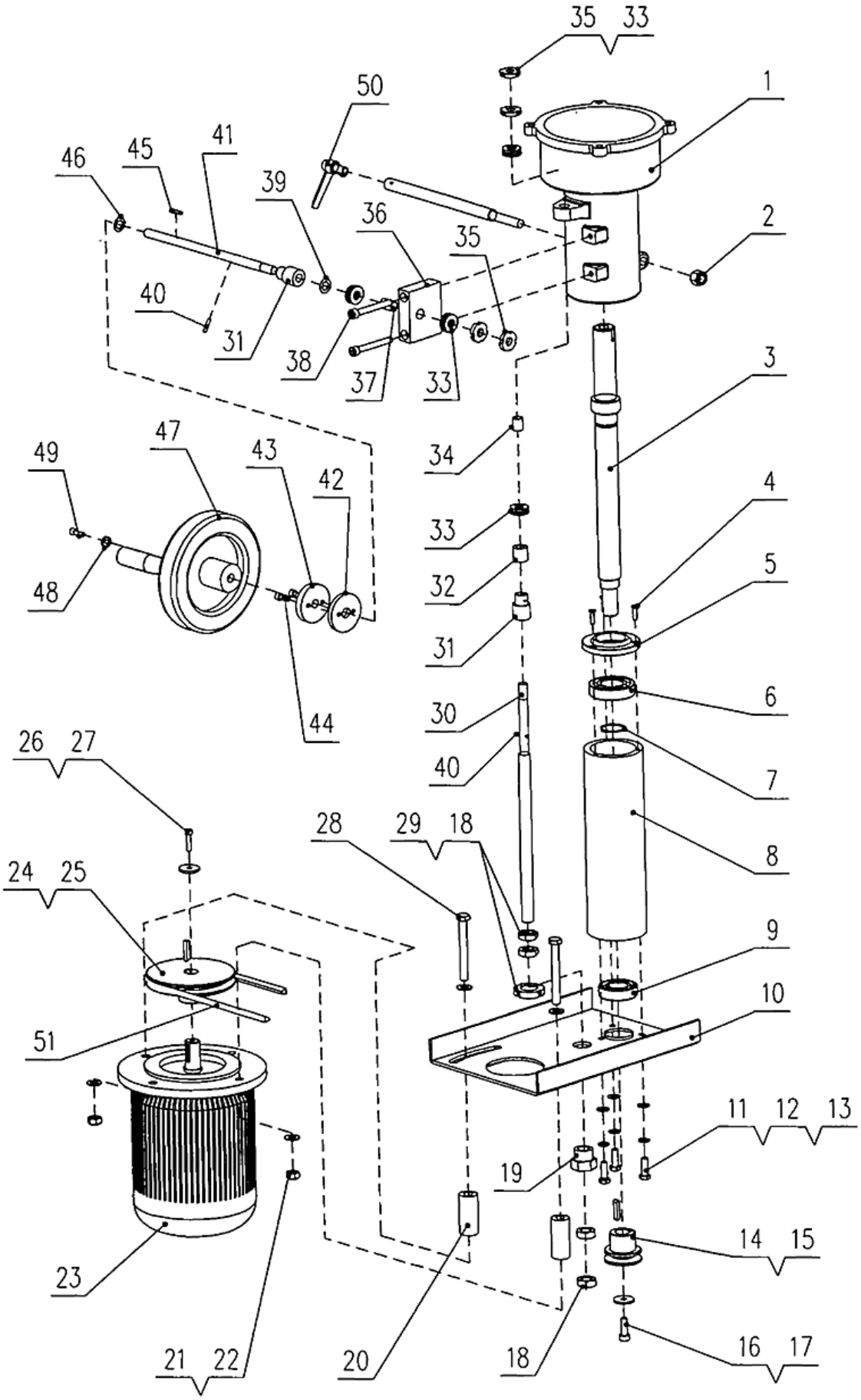
Panel Saw Assembly 3



NO	DESCRIPTION	Q'TY
01	Screw M5x12	1
02	Hand wheel washer	1
03	Hand wheel Φ12x Φ125	1
04	Small clamp plate	1
05	Cap screw M6x12	2
06	Flat washer 6	2
07	Worm gear axle	1
08	Worm gear body	1
09	Spring pin 4X16	2
10	Key A4X12	1
11	Spacer	1
12	Bearing 51101	2

13	Support block	1
14	Hex thin nut M12	2
15	Locking handle	1
16	Cap screw M8x16	2
17	Flat washer 8	2
18	Location stand	1
19	Stand block	1
20	Location pole	1
21	Little cover	1
22	Cap screw M6x35	2
23	Flat washer 6	2
24	Body assembly	1
25	Rack plate	1

Spindle Moulder Assembly



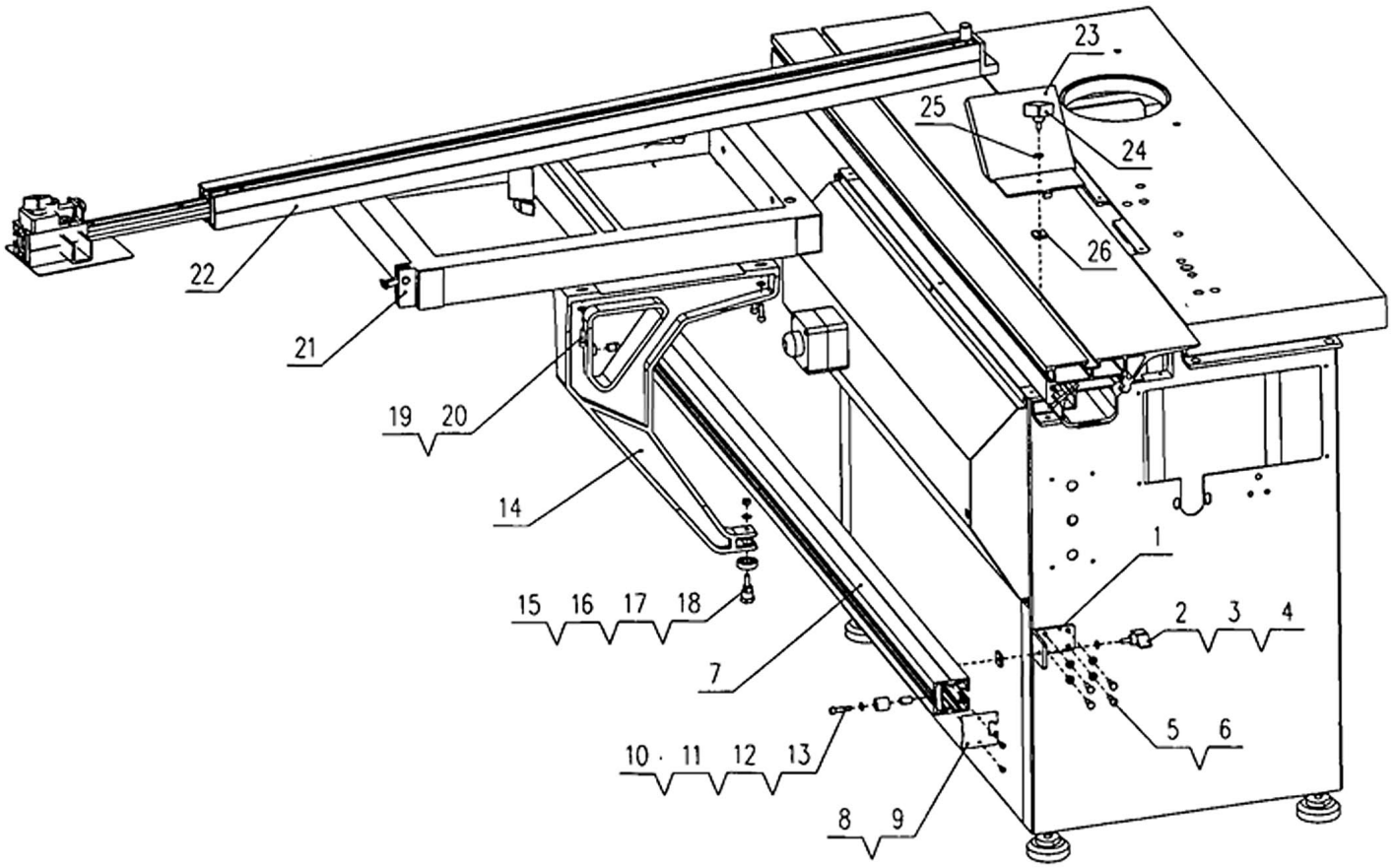
Continues Over....

Parts Breakdown/List

Spindle Moulder Assembly

NO	DESCRIPTION	Q'TY
01	Spindle seat	1
02	Hex locking nut M12	1
03	Spindle	1
04	Bolt M5X16	3
05	Spring cover	1
06	Bearing 6206-2Z/Z2	1
07	"C" ring 30	1
08	Spindle sleeve	1
09	Bearing 6205-2Z/Z2	1
10	Motor plate	1
11	Hex screw M8x25	3
12	Flat washer 8	3
13	Spring washer 8	3
14	Pulley 1	1
15	Key C6X28	1
16	Washer (pulley 1)	1
17	Cap screw M8x20	1
18	Nut	4
19	Lifting nut	1
20	Long sleeve	2
21	Hex nut MIO	2
22	Flat washer 10	4
23	Motor	1
24	Pulley 2	1
25	Key C6X28	1
26	Washer (pulley 2)	1
27	Cap screw M6x20	1
28	Hex screw M10x100	2
29	Round nut M25x1.5	1
30	Lifting thread pole	1
31	Gear	2
32	Spacer	1
33	Bearing 51101	4
34	Sleeve B	1
35	Small round nut M12X1.25	4
36	Clamp block	1
37	Sleeve A	1
38	Cap screw M8x70	2
39	Washer	1
40	Spring pin 4X16	2
41	Pin	1
42	Inner plate	1
43	Outer plate	1
44	Cap screw M6x20	2
45	Key A4X12	1
46	"C" ring 9	1
47	Hand wheel Φ 12x Φ160	1
48	Hand wheel washer	1
49	Screw M5x12	1
50	Locking handle	1
51	V-belt (L=670)	1

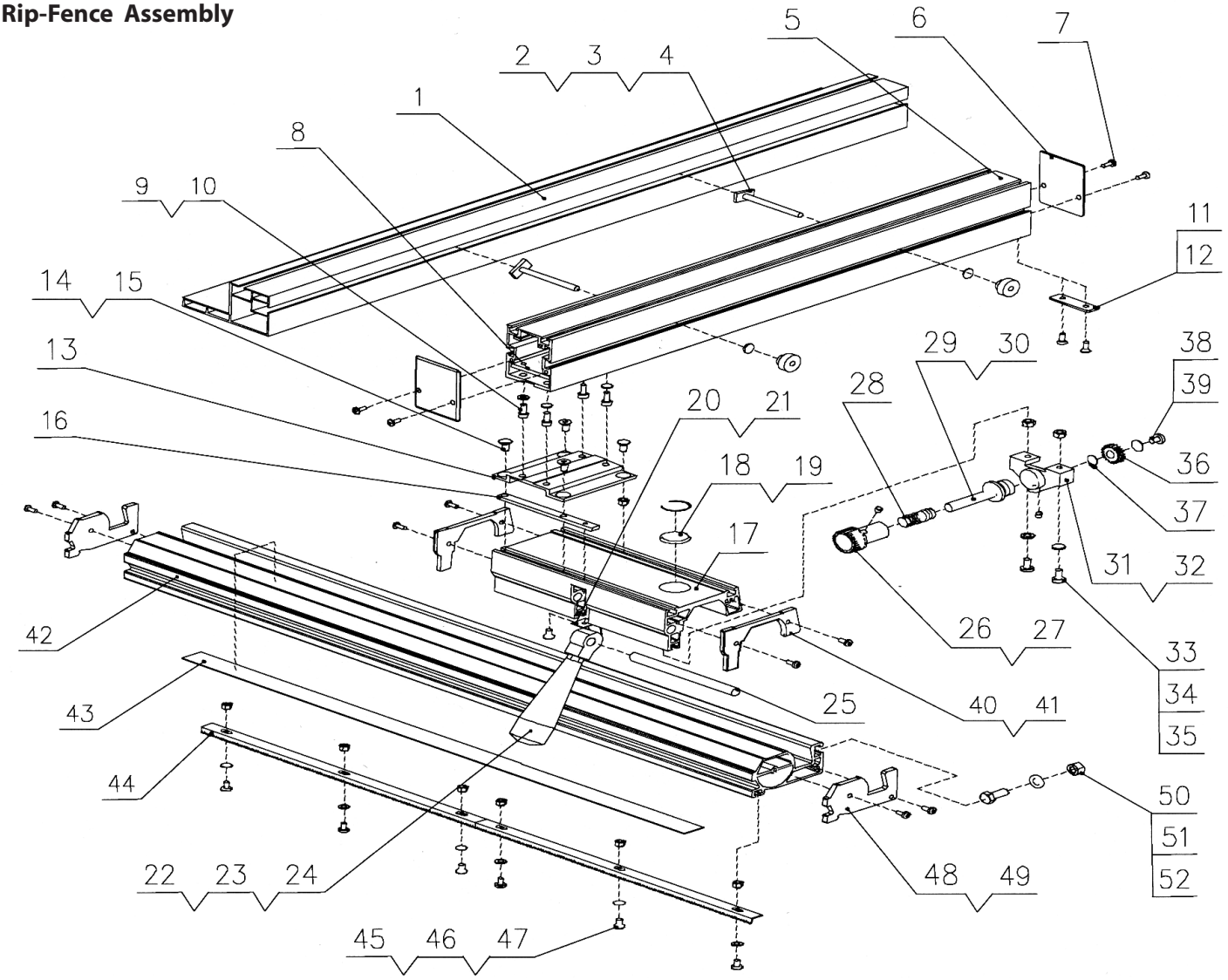
Extension Table Assembly



NO	DESCRIPTION	Q'TY
01	Support plate	2
02	Knob bolt	2
03	Flat washer 6	2
04	Sliding block	2
05	Hex screw M6x16	8
06	Flat washer 6	8
07	Sliding staff	1
08	Cover	2
09	Cap screw ST4X10	4
10	Cap screw M6x25	2
11	Flat screw 6	2
12	Rubber ring	2
13	Inner sleeve	2
14	Arm	1
15	Adjusting centre Bolt	1
16	Bearing 6001	1
17	Flat washer 6	2
18	Hex nut M6	1
19	Cap screw M6x20	4
20	Flat washer 6	8
21	Extension table (total)	1
22	Combined scale (total)	1
23	Fence	1
24	Knob bolt	1
25	Washer 6	1
26	Sliding block	1

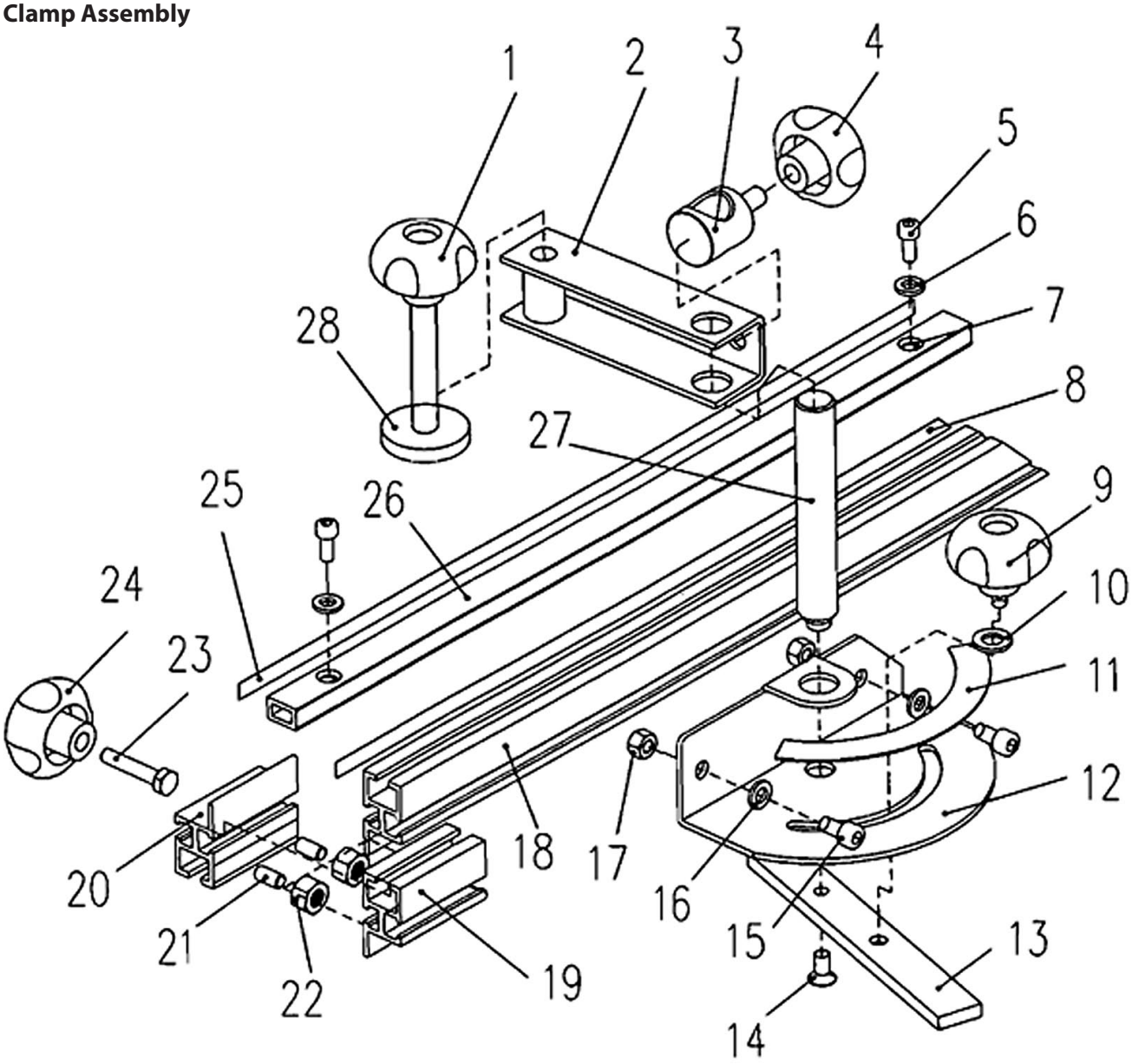
Parts Breakdown/List

Rip-Fence Assembly



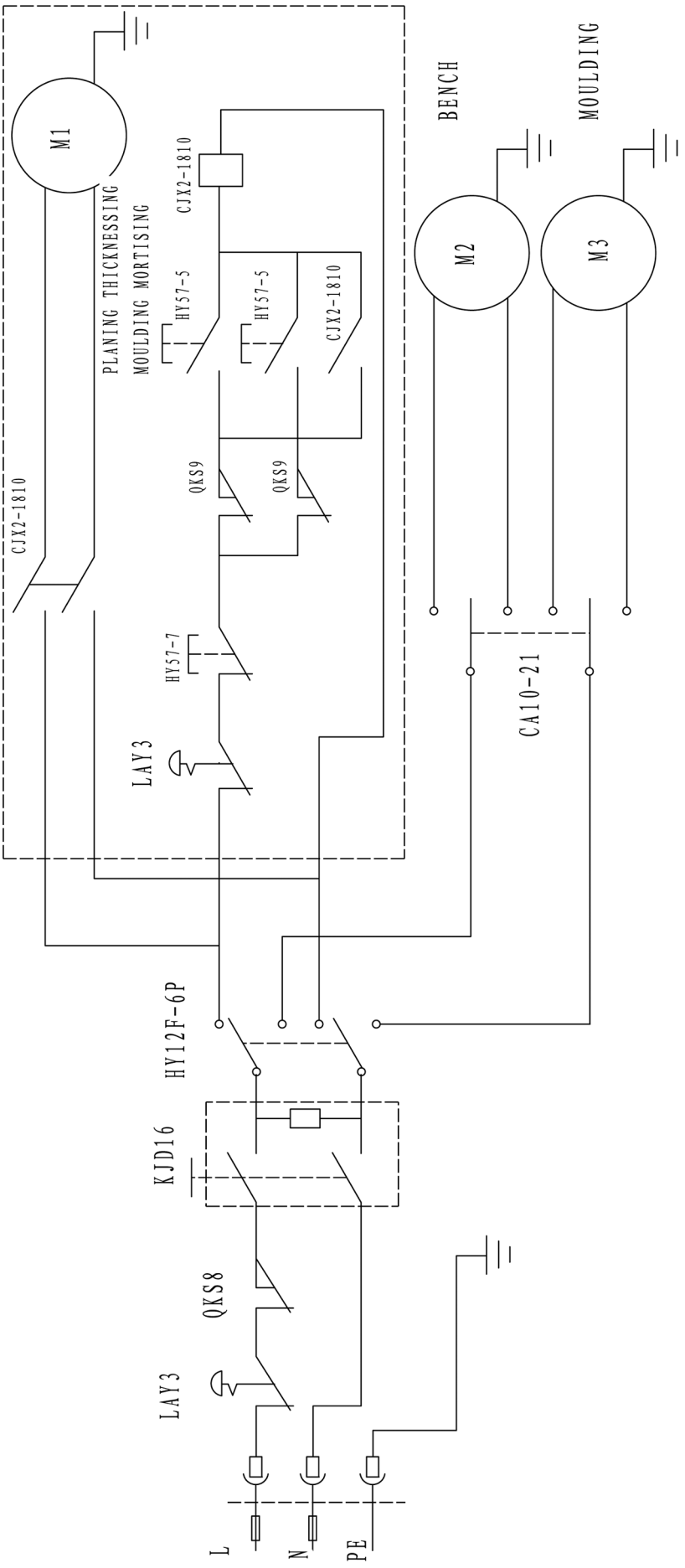
NO	DESCRIPTION	QTY
1	Sliding Plank	1
2	M6 Screw	2
3	M6 Nut	2
4	Washer	2
5	Horizontal Staff	1
6	Horizontal Staff Cap	2
7	M4X10 Screw	4
8	Plate	1
9	M5X12 Screw	4
10	Flat washer	4
11	Pointer Block	1
12	M5X8 Screw	2
13	Fixed Plate	1
14	M6X12 Screw	4
15	M6 Nut	2
16	Strip Plate	1
17	Fixing Seat	1
18	Photo scope	1
19	Spring Collar	1
20	Locking Plate	1
21	M4X8 Screw	1
22	Handle	1
23	Nut	1
24	Locking Block	1
25	Shaft	1
26	Fine adjusting Handle	1
27	M6X8 Screw	1
28	Spring	1
29	Fine adjusting Screw	1
30	Eccentric Bushing	1
31	Fine adjusting Support	1
32	M6X8 Screw	1
33	M5X12 Screw	2
34	Flat Washer	2
35	M5 Square Nut	2
36	Gear	1
37	Collar	1
38	M6X10 Screw	1
39	Washer	1
40	End Cap	2
41	M4X10 Screw	4
42	Slide Fence	1
43	Scale	1
44	Rack	2
45	M5X8 Screw	6
46	Tooth Washer	6
47	M5 Square Nut	6
48	End Cap	2
49	M4X10 Screw	4
50	M8X35 Screw	2
51	Washer	2
52	M8 Nut	2

Work Clamp Assembly



NO	DESCRIPTION	Q'TY
01	Knob bolt	1
02	Horizontal bar	1
03	Clamp sleeve	1
04	Knob (M8)	1
05	Cap screw M5X12	2
06	Washer 6	2
07	Nut M5	2
08	Scale	1
09	Knob screw M6X8	1
10	Washer 6	1
11	Angle scale	1
12	Angle scale seat	1
13	Guide plate	1
14	Screw M6X14	1
15	Cap screw M6X12	2
16	Washer 6	2
17	Nut M6	2
18	Guide plate	1
19	Front location block	1
20	Back location block	1
21	Phillips screw M6X12	2
22	Hex nut M6	2
23	Hex bolt M6X30	1
24	Knob (M6)	1
25	Saw scale	1
26	Vice scale pole	1
27	Angle scale axle	1
28	Clamp block	1

Wiring Diagram

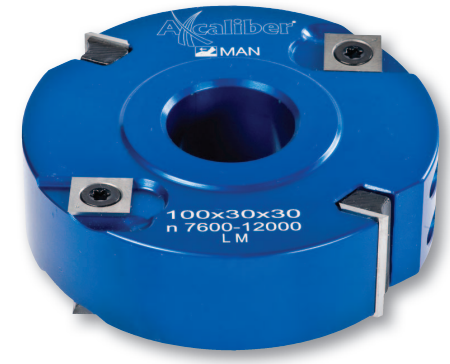


Axcaliber Euro Cutter Head

Two sizes of limiter cutter block, 78mm and 100mm, both with 30mm bores, which designed to accept the range of Euro cutters and limiters shown within this section. The 78mm block is designed for use with the 40 x 4mm Euro and Whitehill cutters, whereas the 100mm block will accept both 40 x 4mm and 50 x 4mm Euro cutters plus the 40 x 4mm and 55 x 4mm Whitehill cutters. For those who are unfamiliar with spindle moulder tooling, limiters are a safety device designed to limit the amount of cut taken by the cutters on each rotation of the block. They take the form of a dummy cutter with the profile cut slightly below the cutter profile and with the sharp edges removed. They fit into the slots in the block in front of the main cutters and are secured by the same wedge as the cutters. The blocks are supplied with a pair of rebate knives and limiters. The 100mm block is aluminium and the 78mm block is steel.

	Code
Euro Cutter Head - 78mm dia, 30mm bore	693078
Euro Cutter Head - 100mm dia, 30mm bore	693100

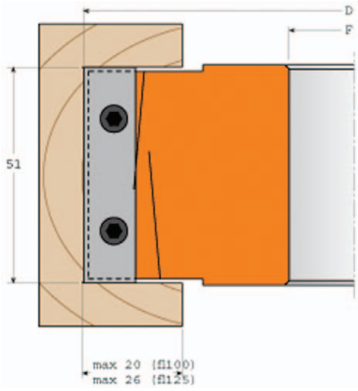
Axcaliber 2 Knife Rebate Block



This cutter head is designed to accurately cut rebates either from the top or bottom of the block. It has two vertical knives and four shear blades with four edges per blade. Also very useful for edge planing boards, battens and mouldings. Maximum rebate depth 20mm. Suitable for manual feed (MAN). Cutting diameter 100mm, height 30mm, bore 30mm.

	Code
Axcaliber 2 Knife Rebate Block	501124

Axcaliber Shear Cutting Rebate Cutter Head

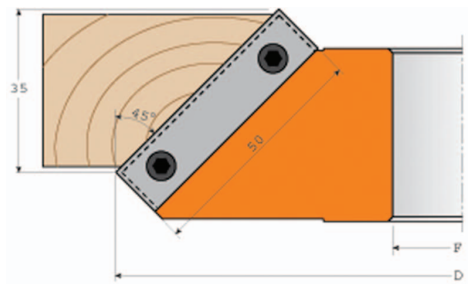


These cutter heads have been designed for: rebating from top and from bottom, jointing and grooving in your spindle moulder machines, double-end tenoner and edging machines. Perfect in many materials, but a better result is achieved using chipboard and MDF, wood composites, plastic materials and laminates. Improved design with shear angle. Cutting diameter 100mm, bore size 30mm.

	Code
100mm Rebatting Cutter Head	501123

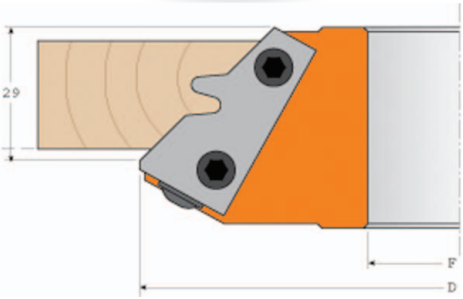
Axcaliber 45deg Chamfer Cutter Head

Chamfer cutter heads cut clean, accurate bevels, chamfers and joints that are great for edge work. Cutting diameter 150mm, bore size 30mm.



	Code
45° Lock Mitre Cutter Head	702467

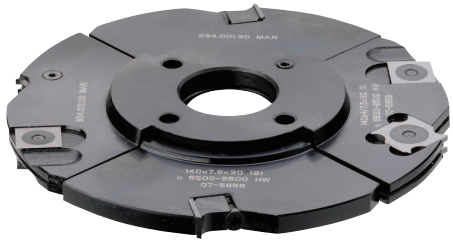
Axcaliber 45deg Lock Mitre Cutter Head

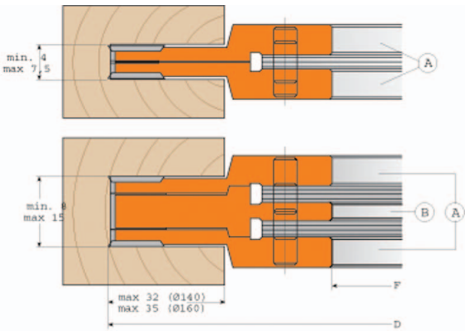


Euro lock mitre cutter head bits are ideal for milling mitre joints in max 29mm stock. The quick and easy way to accurately create boxes, stretcher bars, frames and any assortment of right angle or parallel joint projects. To produce perfectly fitting 45° mitre joints in two steps: first with the workpiece in horizontal position and then with the workpiece in vertical position. To mill sturdy parallel glue joints in two steps: first with the workpiece in horizontal position with the inside face-down and then with the inside face-up. Cutting diameter 140mm, bore size 30mm.

	Code
45° Lock Mitre Cutter Head	702467

Axcaliber Three Piece Adjustable Grooving Set





These cutter heads are the ideal tools to create precision slots and grooves in materials from 4 to 15mm in depth by using the three piece adjustable grooving set. This set includes: 2 x cutter heads type (A) Z4 + V4, 1 x cutter head type (B) Z2, 11 x spacer rings from 0.1 to 2mm. Cutting diameter 140mm, bore size 30mm.

	Code
Three Piece Adjustable Grooving Set	702478

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Normal wear and tear; misuse, abuse and neglect are excluded and the machine should not have been modified in any way. Please do not attempt to service the product without first contacting us; we are happy to guide you but failure to do so may invalidate the guarantee.

The Guarantee is transferable from owner to owner in the first three years but you must have original proof of purchase. Should we need to replace a machine in the first three years the guarantee will still continue to be effective from the original purchase date.

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